

Predictors of Enrollment in TRICARE Prime at
Blanchfield Army Community Hospital

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by
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13. ABSTRACT (Maximum 200 words) In preparation for TRICARE, a survey of 987 beneficiaries from the Fort Campbell catchment area was conducted in order to estimate enrollment in TRICARE Prime at Blanchfield Army Community Hospital (BACH). The survey was also used to identify variables that influence a beneficiaries TRICARE decision. Of particular interest to the hospital commander are those factors that he can influence in order to maximize enrollment in TRICARE Prime at BACH. The results of the survey indicate that the Commander can expect about 60% of the eligible beneficiary population to select TRICARE Prime at BACH. This is consistent with DoD's estimate of 64% for Region 5. This translates to roughly 57,200 beneficiaries who will require a primary care manager at BACH. The study looked at seven categories of variables (demographic, economic, health status, perceived quality of care, access, marketing, and "others"). Numerous variables were significantly related to the intent to select TRICARE Prime at BACH. While the commander can do little to influence the demographic or economic status of beneficiaries, he can influence beneficiary's perceptions of the quality of care provide at BACH, the access to BACH, and the beneficiaries understanding of the TRICARE program. By focusing on these areas, he can solidify the decision of those already intending to select TRICARE Prime and encourage others to consider this option when the time comes.				
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Abstract

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I. INTRODUCTION

In 1966, Congress enacted the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) under Public Law 89-614. The purpose of the program was to supplement care provided by military medical treatment facilities (MTF) for nonactive-duty beneficiaries. CHAMPUS is administered by the Office of CHAMPUS, Office of the Assistant Secretary of Defense, Health Affairs and uses contracted organizations, called fiscal intermediaries, to process and pay claims (GAO 93-94).

During the 1980s, the Military Health Service System (MHSS), which consists of the MTFs and CHAMPUS, experienced a period of rapid growth in costs. The Department of Defense (DoD) health care budget grew by 225 percent between 1980 and 1990 with the CHAMPUS budget increasing by 350 percent during that same period. By comparison, health care expenditures nationally increased by about 166 percent during the same period (GAO 95-104).

Several factors contributed to this period of growth. First, as mentioned above, on a national bases health care costs rose by 166 percent. The same inflationary increases which prevailed on the macro level affected the military health care system as well. Secondly, with the growth of the active duty population in the 1980s came a simultaneous growth in the military health care beneficiary population. This beneficiary population tended to access the health

care system more than their civilian counterparts. In fact, a DoD study of the military health care system found that military beneficiaries access the system about fifty percent more than civilians in fee-for-service health plans. A third factor which contributed to the rapid cost increases was the method of resource allocation for military hospitals which encouraged administrators to increase hospital workload (GAO 95-104).

Between 1981 and 1990, the CHAMPUS eligible population grew by 162 percent. Hospital admissions under CHAMPUS remained relatively constant but outpatient visits grew by over 200 percent. Hospital commanders had no control over CHAMPUS spending and therefore had no incentive to control its usage. In fact, it has been suggested that hospital commanders would refer complicated and costly procedures to the civilian sector since it would not affect their budgets (GAO 95-104).

The effects of these factors on CHAMPUS costs is truly phenomenal. In fiscal year 1984, CHAMPUS care cost about \$1.2 billion dollars. These costs rose to about \$1.8 billion by fiscal year 1986 or approximately a 50% growth rate in two years (GAO 87-65BR). By the end of fiscal year 1989, CHAMPUS costs had grown to nearly \$2.7 billion annually, another 50% increase (Fant and Pool 1990). This rapid increase continued until fiscal year 1991 when the total cost of CHAMPUS stabilized at just over \$3.5 billion per year.

The problem of skyrocketing costs was instrumental in a December 1985 proposal by the DoD to restructure CHAMPUS. Other factors cited included problems with access, poor coordination between CHAMPUS and the MTFs, inadequate monitoring of care provided by civilian providers, and the complex administrative procedures and excessive delays in paying CHAMPUS claims (GAO 87-65BR).

On November 14, 1986, the National Defense Authorization Act of 1987 (P.L. 99-661) was signed into law. The act provided DoD the authority to conduct demonstration projects to evaluate alternatives to CHAMPUS program. The two most prominent programs were the Catchment Area Management Demonstration which gave MTF commanders control of both the direct care and CHAMPUS budget. This allowed the commanders to develop business plans to bring beneficiaries back into the MTF, if they could demonstrate that it would save money by doing so. The second program was called the CHAMPUS Reform Initiative (CRI). This program was broader in scope, covering health care both within the catchment area and throughout an entire region. The DoD contracted with ICF, Incorporated, a consulting firm, to study the feasibility and to assist in the design of the initiative to restructure the current CHAMPUS system. The consultant's reports were then studied and DoD selected the features it believed would best address the problem area mentioned above (GAO 87-65BR).

In the spring of 1987, DoD released the request for proposals (RFP) to begin receiving bids for care under CRI. The initial RFP was intended to provide care in six states (California and Hawaii; Florida and Georgia; and North and South Carolina) divided into three geographical regions. By the closing date, only three contractors had responded with bids. None of the contractors bid on the contract for North and South Carolina. During the review process, two of the three contractors withdrew their bids leaving only Foundation Health Corporation (FHC) to provide the test bed for CRI (CBO 1988). Foundation Health's bid was only for California and Hawaii which further limited to scope of the demonstration.

By initiating the CRI demonstration project, DoD hoped to achieve the following goals: 1) improve the quality of the military health benefit, 2) increase coordination between local military hospitals and CHAMPUS providers, and 3) lower health care expenditures (Fant and Pool 1990). Several key features of the plan were designed to help meet these goals. Prior to CRI, CHAMPUS contracted with private companies to be fiscal intermediaries who would process, pay, and if necessary deny beneficiary claims. Under CRI, the contracted company took on the added responsibility of being the carrier for those beneficiaries under a fixed-price contract. The company, in this case Foundation Health, was paid prospectively based on projected utilization and was thereby placed *at-risk* if

actual utilization exceeded company projections. Economic adjustments and risk sharing corridors were provided to protect the government and the contractor from unforeseeable events. In particular, if care provided at the MTFs was either significantly higher or lower than projected, the contract would be adjusted up or down to account for these differences (Fant and Pool 1990).

Several other key features of the program include: 1) the establishment of alternative delivery systems, 2) the implementation of resource sharing agreements between the contractor and the MTFs, 3) "health care finder" mechanisms to assist beneficiaries in locating provider services, and 4) a quality assurance program to evaluate the quality of care of the civilian providers (GAO 87-65BR).

In establishing alternative delivery systems, CRI developed two alternatives in addition to standard CHAMPUS. The first, called CHAMPUS Prime, was similar to a Health Maintenance Organization (HMO). Beneficiaries were required to enroll in the "plan" and had to select a primary care provider who they would see for all their care. This provider could be at the MTF or could be one of the participating civilian physicians. Referrals for specialty care were made by the primary care physician and the specialist were also part of the "plan". The major benefits to the patient were consistency (a primary provider), low costs for each visit or hospital day, and very little paperwork (Hosek et al. 1990).

CHAMPUS Extra, the second option, was essentially a Preferred Provider Organization (PPO). Beneficiaries in this "plan" could receive care from a participating provider (preferred provider) or a non-participating provider. By using the participating providers, the beneficiary would have his copayment reduced by five percent. In addition, the providers charged a discounted fee which added to the beneficiary's savings (Hosek et al. 1990).

A second key feature of CRI was to channel more care into the MTFs through "resource sharing." The CRI contractor and the MTF commander were to work together to establish resource sharing agreements. The contractor was to provide personnel (physicians, nurses, technicians), supplies, and/or equipment to the MTF to improve its capacity to provide care to beneficiaries using the facility. By encouraging use of the MTF, CHAMPUS utilization would decrease and savings would result (Hosek et al. 1990).

A third feature of CRI was designed to assist beneficiaries seeking care by routing them to either a military or civilian provider. DoD instituted the concept of a "health care finder" because it felt that CHAMPUS utilization patterns were "largely a function of patient self-selection of health care providers, individual physician referral habits, and the inability to obtain appointments in military facilities when needed" (GAO 87-65BR). The contractor was to provide a health care finder (HCF), who was located in or near the MTF, and would assist patient

in securing appointments. The HCFs were to provide assistance in locating care within the MTF, or if the care was not available at the MTF, or not available in a timely manner, to refer them to civilian providers.

The final key feature of CRI was the requirement for the contractor to establish mechanisms to assure the quality of the civilian provider network. DoD required the contractor to meet specific standards for qualifying the "physicians, hospitals, and other health care professionals selected for participation in the preferred provider networks" (GAO 87-65BR). In addition, a system-wide program needed to be established to evaluate the quality of patient care provided by the contractor. This feature was critical in that prior to the implementation of CRI, CHAMPUS had no mechanism for assessing or assuring the quality of care provided by civilian physicians or hospitals. These key features, DoD hoped, would address the issues of cost, access, and quality not only for CHAMPUS, but for the entire military health service system.

FHC began health care delivery on August 1, 1988 in California and Hawaii. Early on in the contract there were serious concerns on the part of DoD as to whether or not FHC would be able to meet the requirements of the contract.

By January 1990, FHC was able to make substantial progress in all areas of concern, so much so that DoD extended the contract for one year and requested permission from Congress to expand the demonstration to Arizona, Nevada, and New Mexico (GAO 90-17).

Before the demonstration project could be expanded to other regions, it was necessary to evaluate the effectiveness of CRI. DoD contracted with three organizations to determine whether the objectives of the program were being achieved by FHC. RAND Corporation, Lewin/ICF, and William M. Mercer Meidinger Hansen, Incorporated were asked to conduct independent studies of CRI (Fant and Pool 1990). Initial evaluations by all three groups suggested that CRI was saving the government money, though none were willing to categorically attribute the savings to CRI. A preliminary RAND study actually indicated that costs increased by 4.6 percent during the period covered by the study, but that actual claims costs were down by nine percent. An evaluation of projected cost without CRI estimated a 22 percent increase for the same period resulting in an overall estimate of a 17.4% savings over standard CHAMPUS (Hosek et al. 1990). Further evaluation by RAND showed that the average discount provided by PPO physicians was between 10 and 20 percent with a range of 40 percent below to 35 percent above the pre-CRI levels (Hosek et al. 1990).

Efforts by DoD to expand CRI began in early 1990. The original contract with FHC included provisions for expansion into Arizona, Nevada, and New Mexico, upon DoD request and with the approval of Congress. Possibly due to the inconclusive nature of the studies findings, CRI never expanded into those states. Two areas where CRI contracts were expanded were in the New Orleans,

Louisiana area and also at three Base Realignment and Closure (BRAC) sites in Louisiana and Texas. The BRAC sites were all due to close by September 30, 1993 (GAO 94-100). Other than these areas and the California and Hawaii contract, CRI experienced no other expansion during the five year trial period from February 1988 to January 1993. In 1993, as the CRI demonstration was nearing its completion, DOD was taking lessons learned from CRI and several other demonstration projects and formulating the TRICARE initiative, "a managed health-care program comprising twelve joint-service geographical regions within the U.S." (Chapman 1995).

In 1993, RAND Corporation completed its evaluation of the effectiveness of CRI in California and Hawaii. What RAND found was that "CRI was 8 percent more expensive than standard CHAMPUS in those two states during the evaluation period" (GAO 94-100). The RAND study also evaluated the issues of access to care and the quality of care provided under each option offered under CRI. What they found was that:

access to care under CRI was superior to that under standard CHAMPUS primarily because of reduced out-of-pocket costs for those who chose Prime and Extra options and because of the designation of program personnel to help beneficiaries identify health care providers to meet their needs. RAND also concluded that there was no discernable difference in the quality of care received under CRI (GAO 94-100).

Through the Department of Defense Appropriations Act of 1994 (P.L. 103-139 § 8025) and several other defense authorization acts, DoD was tasked

with implementing a nationwide, managed care program similar to CRI by September 30, 1996. Armed with this mandate, DoD developed a "modified" CRI program which ultimately became what is known as TRICARE (GAO 94-100).

The TRICARE program adopted several features intended to reduce program costs. While the initial CRI required copayments, the modified version added an enrollment fee for certain beneficiaries and increased the beneficiary copayment. In addition, several managerial changes were made in order to reduce costs to the government. Finally, under the original CRI program, those beneficiaries enrolled in the Prime option could access the outpatient services of the MTF at their own discretion. With the TRICARE, primary care physicians are used as "gatekeepers" to control patient access to other outpatient services of the MTF (GAO 94-100).

Under TRICARE, DoD has established twelve health service regions, each with a medical center commander, called a Lead Agent, responsible for oversight of all care delivery both in the MTF and by civilian providers within the region. Due to the difficulties encountered in implementing TRICARE across the twelve regions, the time table for implementation has now been delayed until May 1, 1998 (GAO 94-145). Contracts have now been awarded in nine of the twelve region with only region 1, 2, and 5 awaiting contract award (Appendix A).

Blanchfield Army Community Hospital (BACH), located at Fort Campbell, Kentucky is part of TRICARE Region 5. Under the current time table, the contract award for region 2 and 5 (to be awarded simultaneously) will occur sometime in late summer of 1997 with health care delivery set to begin May 1, 1998. Prior to beginning health care delivery under TRICARE, the commander of BACH must begin to position the hospital to succeed in the managed care environment. The commander believes that our success is tied directly to our ability to provide a strong primary care base to enroll as many beneficiaries into TRICARE Prime within the MTF (TRICARE Prime is the HMO option similar to the CHAMPUS Prime under CRI). Current estimates indicate that with our present primary care provider base, BACH will be able to enroll approximately 60,000 to 65,000 of the 79,411 beneficiaries in the Fort Campbell catchment area.

Ideally, the commander would like to enroll all catchment area beneficiaries into TRICARE Prime in the MTF. Realistically, looking at past utilization patterns, it appears that some beneficiaries prefer to receive care from other sources using CHAMPUS, private insurance, or other means. It is this reality which serves as the basis for this research paper.

Statement of the Problem

Having the right number and mix of primary care providers is crucial to the survival of BACH. While the commander has a good idea of his current

capacity to provide primary care to catchment area beneficiaries, he is uncertain whether that capacity will be too large or too small when those beneficiaries are presented with the choice of options available under TRICARE. Under TRICARE, beneficiaries can sign up for TRICARE Prime, the HMO option, either in the MTF or through the contractor's network of providers. If they choose not to sign up for Prime, they can use TRICARE Extra, the PPO option, TRICARE Standard, which is like the current CHAMPUS program, or they may seek care which is covered by alternate means, such as private insurance.

The Commander needs to know what the likelihood is that catchment area beneficiaries will enroll in TRICARE Prime at BACH (hereafter referred to as TRICARE Prime). Additionally, the Commander would benefit from knowing what variables are important for beneficiaries in making a decision to participate in TRICARE Prime. Especially important is knowing what variable(s) he can manipulate to optimize enrollment in TRICARE Prime. If these questions can be answered, the commander will be armed with information which can increase the likelihood that BACH will be properly prepared when health care delivery begins under TRICARE in Region 5.

Literature Review

In order for an HMO to remain financially viable during its initial operation, the organization must properly project enrollment and must control its

costs (Pegels 1982). As stated earlier, the focus of this study is on determining who is likely to enroll in TRICARE Prime at the MTF and what factors are most predictive of enrollment.

Attempts at determining predictors of enrollment in a newly forming HMO are not well documented in the literature. An initial search found limited discussion on factors influencing enrollment, and all but one of the authors studied individuals who had already chosen to enroll in an HMO. One author, C. Carl Pegels, proposed a "multivariate linear statistical penetration rate estimation model" to estimate enrollment penetration rates for target employee groups. Unfortunately, this model was never tested in an actual operating HMO to determine if the results are predictive of actual enrollment. At best, his model can be used as a "first cut enrollment penetration estimate" (Pegels 1982).

In order to expand the literature review, two additional areas were reviewed to determine if other factors might influence HMO enrollment. It was believed that studies related to determinants of disenrollment from HMOs and patient satisfaction with HMOs would provide additional variables and confirm those found by the studies of enrollment predictors.

In order to categorize the results of the literature review, the researcher used a combination of the Aday and Anderson's "Behavioral Model of Health Service Utilization" and McKinlay's "six major approaches to characterizing the

predictors of health services utilization” (Torren and Williams 1995). The major headings for the literature review are as follows: 1) demographics, 2) economic, 3) social structure, 4) perceived and evaluated health, 5) health plan characteristics, 6) perceived quality of health plan, 7) satisfaction, and 8) other factors. The categories “health plan characteristics” and “perceived quality of health plan” were added after reviewing the literature, due to their prominence in studies on satisfaction in HMOs.

Demographic Factors

Demographic factors include such variables as age, sex, marital status, family size, and length of time at present location.

Several studies found that age influences participation in HMOs. In studying new enrollees between the ages of 18 to 64, Taylor, Beauregard, and Vistnes found that HMO enrollees tended to be younger than those in traditional fee-for-service plans (Taylor, Beauregard, and Vistnes 1995). Conversely, studies on disenrollment found that once older members join HMOs, they are less likely to disenroll than their younger counterparts (Hennelly and Boxerman 1983; Newcomer, Preston, and Harrington 1996). Evidence on the influence of gender on HMO enrollment is inconclusive. One study indicated that younger members, particularly females, were more likely to disenroll from prepaid group plans (PGP), while another concluded that males were more likely to disenroll as a

general rule (Shimshak, Defuria, and Getson 1988; Newcomer, Preston, and Harrington 1996). Looking at marital status, Newcomer et al. also found that married members in Social HMOs were more likely to leave their plan than their fee-for-service counterparts. Married members of closed panel HMOs also tended to express greater dissatisfaction with their plan than their fee-for-service counterparts. This may be due to the restriction on choice of providers which is typical in closed panel HMOs (Ashcraft et al. 1978).

Two other factors were also found to be significant in enrollment decisions. Evidences seems to support the general contention that HMOs attract those with larger families (Welch and Frank 1986; Shimshak, Defuria, and Getson 1988). This is particularly true in respect to open panel HMOs (Ashcraft et al. 1978). Finally, Berki and Ashcraft found that people who had been residents of a community for shorter periods of time were more likely to join HMOs than those who had long established residency in a community. They believed that this was attributable to not having established a solid relationship with a physician prior to being offered the option to join an HMO (Berki and Ashcraft 1980).

Economic Factors

Economic factors include such variables as income and availability of full or supplemental health insurance coverage.

Several researchers have attempted to determine what economic factors have on the decision to participate in HMOs. The affect of income, whether per capita or family income is well documented in the literature. Findings consistently indicate that as income rises, enrollment in HMOs declines (Berki and Ashcraft 1980; Welch and Frank 1986; Taylor, Beauregard, and Vistnes 1995), yet once enrolled, those with higher income are less likely to disenroll from HMOs (Newcomer, Preston, and Harrington 1996). When Ashcraft et al. looked at income, they found that those with higher income were more likely to select open panel HMOs over closed panel HMOs or fee-for-service plans, but when they looked at per capita income, the differences were not statistically significant (Ashcraft et al. 1978).

How does insurance coverage affect enrollment? Garfinkel et al., studying Medicare eligible beneficiaries, found that those with private supplemental insurance were less likely to join HMOs than those without another sources of medical coverage (Garfinkel et al. 1986). Studies on disenrollment seem to support this finding with those having other insurance coverage, usually through a family member, disenrolling from HMOs at higher rates than those without additional coverage (Shimshak, Defuria, and Getson 1988; Newcomer, Preston and Harrington 1996).

Social Structure and Psychosocial Factors

Social structure and social psychological factors include variables like education, race/ethnicity, social class, occupation, values, attitudes norms, and culture.

McKinley's review of literature on health service utilization identified one category of predictors as Social Structural with variable such as education, ethnicity, social class and occupation (Williams and Torrens 1993). Several researchers have attempted to determine if these factors play a part in a person's decision to participate in an HMO. In the literature reviewed for this research, only one article showed any statistically significant difference and it was related to race/ethnicity. Taylor et al. found that Blacks and Hispanics were more likely to be members of HMOs than their White adult counterparts (Taylor, Beauregard, and Vistnes 1995). None of the articles reviewed included variables for social class or occupation.

McKinley's category of Social Psychological factors included health beliefs, values, attitudes, norms, and culture (Williams and Torrens 1993). Possibly due to the difficulty of measuring these variables, only one article reviewed dealt with any of these issues. Garfinkel et al. looked at the individuals concern with their health and their attitude towards physicians to determine if these factors affected the decision to join an HMO or remain with a traditional

fee-for-service plan. They found that “neither concern with one’s health nor avoidance of physicians made an independent contribution to the enrollment decision” (Garfinkel et al. 1986).

Perceived or Evaluated Health Status Factors

Perceived health status factors include the individual’s personal health assessment (e.g. excellent, good, fair, or poor), the extent of worry about potential illness, amount of time spent in bed or with limited activity due to illness or injury, and specific symptoms or conditions experienced during the reporting period. Evaluated health status factors look at the severity of condition and the severity of symptoms as rated by an actual provider.

These factors largely deal with the question, “Do HMOs seek out or attract a healthier population than traditional fee-for-service plans?” While this has been the contention and concern of many health policy planners, the literature does not support this theory. Of seven studies that asked questions related to patients’ health status, only one study found any difference between members of HMOs and fee-for-service plans. That study found some evidence that HMO enrollees who suffer from rapid unplanned weight loss are less likely to disenroll from their plan than those who experience similar weight loss in fee-for-service plans (Newcomer, Preston, and Harrington 1996). Most researchers have concluded that there are no significant differences between the health status of HMO

enrollees and those in fee-for-service plans (Welch and Frank 1986; Taylor, Beauregard, and Vistnes 1995).

Plan Characteristics Factors

Factors under this heading include premium costs, out-of-pocket costs, benefits package available through the plan, distance/time to the treatment facility, ability to choose a physician, availability of health promotion programs, and availability/accessibility to specialty care and plan hospitals.

Both premium costs and out-of-pocket costs are significantly correlated with an individual's enrollment status in an HMO. Berki and Ashcraft found that the lower an HMO's premiums and out-of-pocket costs are compared to other plan types, the more likely it is that an individual will enroll in the HMO (Berki and Ashcraft 1980). Long and his associates found support for this argument while studying disenrollment in Minneapolis-St. Paul HMOs. They found that disenrollment increased as the "relative" difference in premiums increased between available plans. This increase in disenrollment becomes more pronounced as the number of other health plans available to the enrollee expands (Long et al. 1988). Generally, studies found that HMO members tend to be more satisfied with the cost of care than those who are in traditional indemnity plans.

Many HMOs market themselves as providing more services at a lower cost than traditional health care plans. When available, do these additional benefits

translate into greater enrollment or satisfaction for the HMO? Again, Berki and Ashcraft studied this variable and found support that those HMOs which offer more benefits (preventive care, physical examinations, annual pap smears, etc.) as part of the plan, had significantly greater enrollment than those offering fewer benefits (Berki and Ashcraft 1980). Burns and Wholey found that HMOs which offer additional preventive care services also have higher levels of satisfaction than plans which provide little or no preventive services (Burns and Wholey 1991). Satisfaction with those health plans which offered health promotion programs such as smoking cessation, weight-control, cholesterol screening, etc. was also higher than for those which did not offer such programs (Schauffler and Rodriguez 1994; Sachs and Pickens 1995). Availability of health promotion programs has not been proven to affect a person's decision to disenroll from an HMO, but with retention in HMOs strongly tied to patient satisfaction it has been suggested that this relationship may exist (Warden 1989).

There is also considerable support in the literature that suggests that the accessibility of providers offices and plan hospitals affects enrollment decisions and patient satisfaction with a health plan. As the distance/time it takes to access the provider network increases, compared to other health plans available to the individual, enrollment decreases as does overall satisfaction with the plan (Berki and Ashcraft 1980; Davies et al. 1986) .

Staff model HMOs, after which TRICARE Prime is modeled, traditionally limit the choice of providers available to the patient and control access to specialist by restricting referral patterns. This being true, studies indicate that physician choice is a key component for increasing enrollment in and satisfaction with a health plan (Berki and Ashcraft 1980; Welch and Frank 1986; Sachs and Pickens 1995). Those plans which are less restrictive in their referral patterns to specialists and hospitals score significantly higher in overall satisfaction than those with very strict referral guidelines (Davies et al. 1986; Sachs and Pickens 1995; Rutledge and Nascimento 1996).

Perceived Quality Factors

Several recent studies show that access issues are the greatest predictors of satisfaction (Ribner 1995; Sachs and Pickens 1995; Rutledge and Nascimento 1996). Various authors view access issues in a variety of ways. Berki and Ashcraft describe access as having three dimensions: spatial, temporal, and psychosocial. Spatial access applies to the location of the delivery site in relation to the users home or workplace. Temporal access refers to the time between when the patient attempts to access the system and when they actually see a provider. It also refers to the wait time to see a provider once at the delivery site. Finally, psychosocial access refers to the "perceived social distance to (the) provider" or the ability to "communicate freely and openly with (the) provider" (Berki and

Ashcraft 1980). Using these “dimensions” of access, numerous studies found them to have significant influence on a patients enrollment intentions and satisfaction with the source of care (Shimshak, Defuria, and Getson 1988; Rossiter et al. 1989; Margo and Margo 1990; Spierer et al. 1994; Ribner 1995; Sachs and Pickens 1995; Rutledge and Nascimento 1996). Key to satisfaction is the patient-provider relationship. Satisfaction within HMOs increases significantly when providers demonstrate a willingness to be courteous, to listen and discuss the patients problems, and to explain results of tests and diagnoses (Rossiter et al. 1989; Spierer et al. 1994; Ribner 1995).

Perceived quality is also influenced by continuity of care, that is seeing the same physician on each visit and being able to access that physician after hours. Both of these factors have been demonstrated to have a positive influence on patient satisfaction (Davies et al. 1986; Spierer et al. 1994). Finally, the patient’s perception of the provider’s clinical competence affects satisfaction. Two studies found that patients in fee-for-service plans were more satisfied with the perceived clinical competence of their providers than patients in HMOs (Rossiter et al. 1989; Burns and Wholey 1991).

Satisfaction Factors

Satisfaction factors include variables such as overall satisfaction with health plan, satisfaction with paperwork, satisfaction with non-physician

providers, and satisfaction with parking arrangements, office hours, and courtesy of staff.

How does overall satisfaction with an HMO affect the enrollment status and satisfaction of members? First, overall satisfaction significantly affects a health plan's disenrollment rate. Evidence indicates that while an enrollee might dislike specific aspects of a plan (such as parking, waiting time in the office, or even the doctor-patient relationship), overall satisfaction is the best predictor of continued enrollment (Hennelly and Boxerman 1983; Shimshak, Defuria, and Getson 1988). This being said, members of HMOs appear to be as satisfied overall with their plan as those in traditional fee-for-service plans (Davies et al. 1986; Rossiter et al. 1989; Sachs and Pickens 1995).

Specific aspects of HMOs also affect enrollment and satisfaction. One aspect of HMOs which provides them an advantage over most fee-for-service plans is that they minimize the paperwork normally required of enrollees. This characteristic is one factor which contributes to an increase in enrollment in HMOs and also an increase in satisfaction when the patient accesses the health care system (Garfinkel et al. 1986; Rossiter et al. 1989). HMOs typically use more physicians assistants (PA) and nurse practitioners (NP) than fee-for-service plans. This difference has a mixed affect on the satisfaction patients express with these plans. On one hand, patients feel that HMO non-physician providers are somewhat less clinically competent, yet they are more satisfied with the time PAs

and NPs spend listening to them and explaining tests, diagnosis, and treatment plans (Burns and Wholey 1991; Ribner 1995).

Poor parking, office hours, and the courtesy of staff members also affect satisfaction. Of these three factors, courtesy was found to have the greatest affect on a patient's attitude toward the plan (Margo and Margo 1990; Ribner 1995; Rutledge and Nascimento 1996). The availability of parking and extended office hours improved enrollee satisfaction, but were not significant determinants of increased enrollment or disenrollment or in the overall satisfaction with the health plan.

Other variables

While little emphasis has been place on the effects of marketing on enrollment, there are indications that the more exposure a person has to information on an HMO, the more likely they are to enroll in the plan. Garfinkel et al. found that having a family member or friend who is a member of an HMO is a good predictor of enrollment. They also found small group meetings and personal mailings were highly effective in increasing enrollment (Garfinkel et al. 1986). These methods may be most effective because they provide the individual an opportunity to understand, in greater detail, the intricacies of the plan's benefits. This is supported by strong evidence that one of the greatest causes of early voluntary disenrollment from HMOs is a misunderstanding of the plan's benefit package (Rossiter et al. 1989).

Finally, there is evidence that usage affects disenrollment. Members who rarely access the health care system are less likely to join HMOs in the first place and more likely than moderate or heavy users to disenroll when provided the opportunity (Shimshak, Defuria, and Getson 1988; Newcomer, Preston, and Harrington 1996). They may feel that they do not need coverage in the first place or it may simply be that they have not established a close patient-provider relationship, and therefore have no loyalty to the HMO. These considerations may be particularly significant in a generally healthy and highly mobile population like that found in the military.

Purpose

The primary purpose of this study is to provide the Commander with an initial estimate of enrollment into TRICARE Prime. A number of variables will be assessed in order to determine what factors might affect a beneficiary's decision to select TRICARE Prime, and which factors the Commander can influence to increase the likelihood that beneficiaries will select this option.

Predictor variables will fall under the following categories:

- 1) demographic variables
- 2) economic variables
- 3) health status variables
- 4) quality of care variables
- 5) access variables
- 6) market exposure variables
- 7) other variables

II. METHODS AND PROCEDURES

Sample Selection

Before conducting a survey of beneficiaries, the researcher must define the relevant population for the study (Cooper and Emory 1995). The possibilities for defining BACH's population are almost endless. One possible population is those individuals who have accessed the BACH system within a defined period of time. This population would include individuals on active duty, dependents of active duty military, retirees and their dependents, survivors, and others eligible for care in military facilities. They could be from within BACH's catchment area or from anywhere in the world, as long as they used BACH services within the stated time frame. A second population could be defined as only those eligible beneficiaries within the BACH catchment area who accessed the system within a given time period. Since BACH treats many beneficiaries from outside the catchment area (e.g., Nashville, TN and Paducah, KY), this population would be smaller (assuming the same time period is used). A third possibility for the survey population is all eligible beneficiaries within the BACH catchment area, whether they have or have not used the facility.

As stated earlier, the main purpose of this survey is to provide the commander with an initial estimate of TRICARE Prime enrollment at BACH. This "purpose" helped define the study population in several ways. First,

TRICARE Prime will only be available to catchment area beneficiaries. This immediately eliminated non-catchment area beneficiaries from the study population. Second, since active duty military are automatically enrolled in TRICARE Prime, single soldiers without dependents were excluded from the study population. Finally, since all catchment area beneficiaries under age 65 are eligible for TRICARE, limiting the population only to BACH users might exclude a significant group of beneficiaries who for various reasons have not used the system. Taking these factors into account resulted in a study population of all active duty and their dependents (except single soldiers with no dependents), retirees and their dependents under age 65, and survivors under age 65 living in the Fort Campbell catchment area. Later, due to time constraints, all non-Army beneficiaries were eliminated from the study population. Since non-Army beneficiaries accounted for a very small portion of the population, it was believed that the time and effort required to secure their names and addresses would not significantly enhance the study's findings.

According to the Defense Enrollment Eligibility Reporting System (DEERS), the Fort Campbell catchment area comprises an estimated 79,411 eligible beneficiaries. Nearly 23,900 are active duty soldiers, airmen, and sailors. Of those, approximately 15,500 are either married, divorced, widowed, or single soldiers with dependents. These soldiers have approximately 34,700 dependents.

The remaining beneficiaries, roughly 20,800, are retirees, their dependents, or survivors (about 3000 are over 65 and not eligible for TRICARE).

Since it was impractical to survey all eligible beneficiaries, a method had to be devised to provide a representative sample from the population. Several steps were involved in designing the sample. The first step, after determining the relevant population, was to secure or develop a sampling frame. A sampling frame is a list or a method of obtaining information on the relevant population. The ideal sampling frame in this study would be a listing of all active duty service members and their dependents living in the catchment area, all retirees and their dependents under age 65 living in the catchment area, and all survivors under 65 living in the catchment area. The next step was to determine the type of sample to be used in the study. Several sampling types were possible to include: simple random sampling, stratified sampling, or cluster sampling. The final step was to select the sample size for the study. When considering the sample size, several factors must be taken into account. These include the desired confidence level and precision of the estimates as well as the cost involved in conducting the study (Cooper and Emory 1995; GAO/PEMD-10.1.6 1992).

One of the first challenges was to locate a database that provided a reasonably accurate list of beneficiaries. The Composite Health Care System (CHCS) and Ambulatory Data System (ADS) were immediately eliminated since

they track only those who have used BACH services. Another problem with these databases was the lack of processes to identify when users depart the area. This meant that a significant number of individuals in the database may have departed the area, but still show up as eligible for care under TRICARE. Another possible data source was DEERS. The reliability of DEERS data is always in question since it relies on the individual to maintain accurate data. Due to its questionable accuracy, DEERS was also eliminated as a sampling frame for the study.

Ultimately, two sources of data were selected which most accurately represented the relevant population, the Standard Installation Division Personnel System (SIDPERS) and selected information from the Retired Pay Operations database provided through the Retirement Services Officer at Fort Campbell, Kentucky.

For active duty service members and their dependents, the SIDPERS database was used because it provided up-to-date information on their name, rank, unit, marital status, and number of dependents. While dependents were not provided by name, they were accounted for and were surveyed as a part of the family unit. This database worked well since, as will be discussed later, surveys could be sent to the unit through post distribution to minimize mailing costs. Another advantage was that this database could be easily filtered to eliminate individuals with no dependents. One limitation of using SIDPERS was that it did not account for those individuals in the catchment area whose sponsors were

stationed at other posts, camps, or stations, but for various reasons leave their dependents here.

The Retirement Services Officer was contacted in order to obtain a list of retirees in the catchment area. Mr. Bill Weddington was able to provide a diskette from the post Directorate of Information Management (DOIM) which contained the name, rank, and address of all retirees and survivors receiving retirement checks in the states of Tennessee and Kentucky. By deleting all records on individuals whose zip codes were outside the catchment area, a list of catchment area retirees was developed for the study. As with most sampling frames, this list had shortcomings. First, since the list did not have information on the retirees' ages, the possibility existed that some non-eligible retirees (those over 65 years old) would receive surveys. Secondly, it was initially believed that the list included all area retirees from all services. It was not until the survey was due to be distributed that it was discovered it only included retired Army personnel. Due to time constraints, the survey proceeded without including retirees from the sister services.

After the sampling frame was developed, the next task was to determine the sample type. A cost effective means of procuring a sample was needed that would still be representative of the population under study. At this point an assumption was made that different beneficiary categories might respond

differently to the survey due to their level of experience with the military health care system and their economic status. It seemed logical to use the delineations of lower enlisted (E-1 to E-4), non-commissioned officer (E-5 to E-9), junior officers (W-1 to O-3), senior officers (O-4 to O-6), and retirees as comparison groups. This technique, called clustering, allows the researcher to survey groups of sampling units rather than selecting individual sampling units. Since these clusters still include all beneficiaries in the catchment area, a random sample had to be taken from each cluster. This is referred to as two-stage cluster sampling (GAO/PEMD-10.1.6).

The next task was to determine the sample size. Due to a very tight budget, the sample size needed to be as small as possible, yet large enough to provide meaningful information. According to Davies and Ware, "experience indicates that a representative sample of about 100 to 150 completed surveys for each comparison group is sufficient to detect moderate to large differences in consumers' evaluations" (Davies and Ware 1991). Since the population was divided into five categories, a minimum of 500 samples were needed to compare the responses of each group, or cluster. Even if 100 percent returned their survey, the project's budget could not support mailing 500 surveys with return postage. In order to increase the sample size, it was decided that the active duty participants would receive their surveys through post distribution and have the option to return

it either through distribution or by placing a stamp on the return envelop at their own expense. By doing this, each group's sample could be increased to 200, requiring only a 50 percent return rate, while still allowing for comparisons between groups.

At this point, the SIDPERS and retiree databases were queried to develop lists of the five beneficiary clusters mentioned above. It was discovered that the category of senior officers (O-4 to O-6) contained only 407 names, while junior officers (W-1 to O-3) contained 2004 names. In order to more evenly distribute the lists, it was decided that those officers in the grade of O-3 would be included in the senior officer category. This resulted in a more even distribution with 1362 junior officers and 1049 senior officers. Once all of the lists were developed, a random sample was drawn from each by programming an Excel Spreadsheet to eliminate two out of every three records through several iteration of the spreadsheet. Usually around the third or fourth iteration, the list was randomly resorted to ensure that the first two records in the list had an equal chance of being deselected during the process. After completing this process with each list, all active duty names were consolidated into one comprehensive list and sorted alphabetically by both Unit Processing Code (UPC) and last name. The retiree/survivor list was sorted alphabetically by zip code. This was done to assist the researcher in grouping surveys for distribution and mailing. These lists were

than merged using WordPerfect and made into mailing labels. In all, 987 names were randomly selected for participation in the survey.

Survey Instrument

In order to create the survey, several well known and well documented surveys were gathered as sources for questions to be used in the current instrument. The Group Health Association of America developed a Consumer Satisfaction Survey which can be used by employers who want to “obtain valid and comparable information on employees’ satisfaction with different prepaid managed care systems” (Davies and Ware 1991). The Health Outcomes Institute developed a Health Status Questionnaire designed to solicit responses to questions specifically related to the individual’s perceived health status. A third instrument used in the development of the current instrument was the Annual Health Care Survey of DoD Beneficiaries. This survey questions the beneficiary on utilization of the direct care and CHAMPUS delivery systems as well as their satisfaction level within the systems. Finally, the National Committee for Quality Assurance (NCQA), a HMO accreditation body, provides a survey with its Health Plan Employer Data and Information Set (HEDIS) 2.5. HEDIS 3.0, was not available in time to be used in developing this survey instrument.

The TRICARE Pre-Enrollment Survey, as it was called, was designed to solicit responses regarding the individual’s intent to enroll in TRICARE Prime at

the MTF (the dependent variable). Independent variables solicited responses on their perceptions of access to various services at the MTF, their perceived health status, their perception of the quality of care provided at the MTF, their exposure to TRICARE marketing efforts, the influence of economic factors on their decision process, and general demographic information.

The completed survey instrument contained 62 total items (Appendix B). Items 1 and 2 were designed to measure the respondents exposure to TRICARE and their perceived level of understanding of this health benefits program. Each possible response was coded as a binary variable. Throughout the survey, a "yes" (or marked) response on a binary variable was coded 1 and "no" (or unmarked) response was coded 0. Item 3 asked the respondent to identify which TRICARE option they planned to select, based on their current knowledge of the program. They were given five possible responses, each a binary variable, with the "TRICARE Prime at BACH" variable ultimately becoming the dependent variable in the study. Item 4 sought information on where they usually receive medical care. This question had multiple responses resulting in nine binary variables. Item 7a and 23 were similarly worded question concerning the use of BACH during the past 12 months. Those indicating they had not used BACH for most of their medical care in the past 12 months, on question 7a, were asked to complete item 7b. This question asked them to explain the reason(s) they had not

used BACH for their medical care. This item had 13 binary variables as possible responses.

Eleven items in the survey were related to economic factors (items 5,6,8-15, and 58). Questions 5 and 6 requested information on insurance coverage, each with multiple responses coded as binary variables. Items 8, 9, 10, and 11 asked respondents to indicate how much they agreed to statements related to their willingness to pay for health care and statements related to choice of where care is received versus the cost of health care. These items used a 5-point Likert-type scale with a “strongly agree/strongly disagree (SA/SD) response. Items marked strongly agree received a score of 5, while those marked strongly disagree received a score of 1. Items 12, 13, 14, and 15 asked them to indicate “the most they would be willing to pay” for an office visit, for an emergency room visit, for laboratory and X-ray procedures, and for prescription medications. These items were included to determine if a willingness to pay for care influenced a persons decision to choose TRICARE Prime, which is generally considered the lowest cost TRICARE option. Item 58, which asks for information about family income, was included to evaluate the influence of income in the TRICARE decision.

Items 16 through 22 relate to the individual’s perceived health status and utilization of the medical care system. Item 16 and 20 ask the respondent to rate their perceived health. Question 16 uses a 5-point Likert-type scale “excellent” to

“poor” (E/P) scale with excellent rated as a 5. Question 20 asks them to respond to the statement, “My health is excellent” and used five binary coded variables from “definitely true” to “definitely false”. Question 17 has the individual rate their health compared to one year ago using five binary coded variables from “much better than one year ago” to “much worse than one year ago”. Question 18 uses a 6-point bodily pain scale with “none” coded 1, and “very severe” coded 6. Question 19 uses a 5-point scale to rate how pain has interfered with normal activities. No interference is rated 1 while extreme interference is rated 5. Finally, two questions (21 and 22) related to utilization of the health care system. These questions were asked to determine if high utilization would influence the TRICARE decision. Question 21 was a dichotomous variable which asked if anyone in the family had “significant medical problems which required regular clinic visits or hospitalization”. Question 22 solicited information on the number of visits the family made to doctor’s office and/or emergency room in the past 12 months. Responses were binary variables ranging from “none” to “more than 20 visits”.

A series of thirteen items solicited opinions on the quality of care received at BACH. Based on the response to question 23 which asked, “Have you received any medical care at BACH or a TMC in the past 12 months?”, only those answering “Yes” to this question were asked to rate these items. One question

(24) asked the respondent to rate the overall health care received at BACH on a 5-point Likert-type E/P scale, with a score of 5 for "excellent" and 1 for "poor".

Questions 34 through 44 and 46 had them rate various aspect of quality described in literature as correlating with patient satisfaction such as the thoroughness of treatment, provider competence, provider-patient relationship, courtesy of staff, time spent with the provider, and outcome of care. The final item in this section asked the respondent to again rate the "overall quality of care and services." This is similar to question 24 and was inserted in the survey to check for internal consistency of the survey instrument. These items also used the 5-point Likert-type scale mentioned above, but added a "not applicable" response since some individuals may not have had an opportunity to evaluate specific aspects of perceived quality. Items marked "not applicable" would be left uncoded during initial data entry.

Access to various aspects of health care is a critical element of the TRICARE program. It is also one of the greatest predictors of satisfaction in HMOs (Ribner 1995; Sachs and Pickens 1995; Rutledge and Nascimento 1996). Due to its importance, fourteen questions were added to the survey to evaluate beneficiaries perceptions of access at BACH (items 25-33,45, and 47-50). Items 25 through 33 and 45 used a 5-point Likert-type E/P scale ("excellent"=5, "poor"=1) with a "not applicable" response available for those whose experience

did not enable them to rate that aspect of access. These items asked for opinions on the convenience of location and hours, access to primary care, specialty care, and emergency room care, the telephone appointment system, access to health care information by phone, access to prescription medication, and wait time to get an appointment and wait time in the clinics. Items 47 and 48 were added to further delineate how long patients wait for appointments and how long they wait in the clinic to be seen on the day of their appointment. Respondents were given a variety of responses to both questions and the answers were coded as dichotomous variables to determine if longer wait times influenced a persons TRICARE decision. One question (49) was inserted to see if the time it took to drive to BACH would influence the decision on which TRICARE option beneficiaries select. Since BACH has only recently offered evening clinics, and does not currently offer a Saturday appointment-based clinic, one final question (50) was added to the survey to determine if a lack of these services would influence their TRICARE decision. This question had the added benefit of identifying the level of interest in extended hours at BACH.

The final category of survey items solicited general demographic data concerning the age, sex, beneficiary category, pay grade, branch of service, marital status, number of children, education, race, length of time in the Fort Campbell area, and their home zip code (items 51-57 and 59-62).

To assure reasonable validity of the survey instrument, it was predominately constructed by using questions from survey instruments developed by experts in the field of patient satisfaction and health status measurement (Davies and Ware 1991; Health Outcomes Institute 1993; Annual Health Care Survey of DoD Beneficiaries 1994; Health Plan Employers Data Information Set Version 2.5 1995). All questions related to quality of care, access to care (except item 50), and health status were used on at least two of these well established instruments. Non-military specific demographic data was also common among these surveys. Items 4, 5, 6, 7a, 7b, 53, 54, 55, 57, and 61 were adapted from the DoD survey. Only items 1, 2, 3, 8 through 15, and 22 were developed specifically for this survey.

As another test of validity, the survey instrument went through several pretests before being printed in final form. Participants in the pretests were asked to provide input on its content and clarity. Based on their responses, several questions were either reworded, eliminated, or added to improve its utility. In addition, a "Comments" page was added to the instrument to allow respondents to clarify responses or provide additional information not included in the survey. This proved to be a valuable source of information on patients perceptions of BACH.

Reliability of the questionnaire was assessed by performing a Cronbach's alpha reliability analysis on several of the variables. A 22 item analysis was done on questions 25 - 46 since they were similarly scaled items asking participants to rate various aspects of care at BACH. The analysis revealed a high degree of internal consistency with an alpha coefficient of 0.9495. Two bivariate analyses were also conducted, one between the variables CAREBACH and BACHCARE, and one between the variables RATECARE and OVERALL. These yielded alpha coefficients of 0.7382 and 0.7826 respectively.

The final survey contained 62 items with a total of 197 variables. A listing of the variables and their operational definitions is at Appendix C. The pilot testing indicated that the survey would take 15 to 20 minutes to complete.

A cover page was attached to the survey to introduce its purpose and to provide instruction for completion of the survey (Appendix B). The design was adapted from a Government Accounting Office (GAO) publication entitled "Developing and Using Questionnaires" (GAO/PEMD-10.1.7 1993). In order to save printing and mailing costs, this cover page also served as the transmittal letter.

When responding to questionnaires, subjects may be concerned that the information can be traced back to them resulting in embarrassment, loss of privacy, or retaliation. Measure needed to be taken to assure them that this would

not occur. Cooper and Emory recommend three guidelines to safeguard respondent's rights. First, explain the benefits expected by the research. Second, explain that their rights are being protected and say how this is being done. Finally, obtain the informed consent of the respondent. This can be done by explaining that the questionnaire contains some sensitive questions and the respondent is "free not to answer any question that makes them uncomfortable" (Cooper and Emory 1995). The cover page of the survey incorporated all three of these guidelines.

TRICARE Brochure

A major concern during the development of the project was that beneficiaries in the area might have insufficient information to make an informed decision about TRICARE. With TRICARE still more than a year away, the command has been hesitant to pursue a massive marketing blitz due to the high turnover of personnel in the community. In order to provide participants with information, so they could make an reasonably informed decision, it was decided that a brochure would be sent with the survey.

The DoD TRICARE Marketing Office has many general information brochures available for beneficiaries, but most were either too bulky and lengthy or they provided too little information to be useful for this project. What was needed was a brochure that could be quickly and easily read while providing the

maximum amount of information. In order to minimize printing and mailing cost, the brochure had to be kept to no more than one page, printed on front and back. Materials from several TRICARE brochures were assembled and modified to create an attractive, easy to read brochure (Appendix D). After several revisions, based on input from TRICARE experts and beneficiaries, the brochure was ready for inclusion in the mailing.

Mailing the Survey

With the questionnaire, tri-fold brochure, and mailing list complete, the survey was ready for distribution. Each respondent received a survey, a brochure, and a return envelop in the mailing. The return envelopes were address to the hospital to the attention of the Administrative Resident. Only retirees envelopes were provided return postage. Active duty were instructed to return the survey through post distribution, but were given the option to return through the postal system at their own expense. It was believed that since free return through distribution was available, lack of return postage would not impact on the return rate. Similarly, only retirees had their survey mailed to their residence. Active duty surveys were distributed through post distribution. This was done to keep the survey cost to a minimum.

On March 31, 1997, the questionnaires were delivered to the United States Post Office on Fort Campbell, Kentucky for distribution. Subjects were given

until May 15, 1997 to return the completed questionnaire for inclusion in the study. Typically, a follow up mailing is conducted to remind the subjects to return the completed questionnaire (GAO/PEMD-10.1.7 1993). This was not done due to budget constraints. By the survey cutoff date, 180 questionnaires had been returned for an overall response rate of 18.2%. Of the 180 responses, fifteen were unusable because the respondents did not answer the question determined to be the dependent variable. This resulted in a 16.7% response rate. Thirty-nine questionnaires were returned as undeliverable, most of them due to soldiers leaving Fort Campbell.

III. RESULTS

After the survey cutoff date of May 15, 1997, the 165 usable surveys were coded and entered into the Statistical Program for the Social Sciences (SPSS) for data analysis. Descriptive statistics were computed and a partial correlation matrix was run using PRIMEMTF as the variable of interest and the remaining 195 variables as predictor variables (the ZIPCODE variable was not included in the analysis). The alpha level for inclusion in the final model was set at $p < .05$. The listing of descriptive statistics and correlation coefficients is at Appendix E.

Of those responding to the survey, 99 (60%) indicated that they intended to select TRICARE Prime at BACH (dependent variable). The intent to select the TRICARE Prime with the contractor, TRICARE Extra, and TRICARE Standard options was 30 (18.2%), 10 (6.1%), and 22 (13.3%), respectively. Four (2.4%) had no intention of using TRICARE.

Demographic Variables

Survey respondents were predominately male (62.4%), active duty (46.7%), and Caucasian (78.2%). Most had been in the Fort Campbell area for at least one year, with 40% reporting stays of over 3 years. The greatest number of responses came from current or retired Senior NCOs (56) and Senior Officers (54) or their families, accounting for 66.6% of the total responses. One hundred forty-four (87.3%) were married, 4 (2.4%) were separated, 14 (8.5%) were divorced, 3

(1.8%) were widowed, and 2 (1.2%) were single. Most had three or fewer dependent children (95.7%).

Those responding to the survey were well educated with 31.5% reporting some college education, 27.3% indicating they had graduated from college, 9.1% having some post-graduate education, and 21.2% possessing post-graduate degrees. The mean age was 39.546 years old, with only 15.2% of respondents under 30 years old. Interestingly, both age and having some post-graduate education were negatively correlated to the dependent variable. Table 1 lists those demographic variables which achieved statistical significance with intent to select TRICARE Prime.

Table 1

Effects of Demographic Variables on Intent to Select TRICARE Prime at BACH

Variable	n	Mean or Proportion	χ^2*	t	p Value
Have two dependent children living in the Fort Campbell area	165	0.303	5.86		.015
Have four dependent children living in the Fort Campbell area	165	0.036	4.15		.042
Education level = College graduate	165	0.274	4.35		.037
Education level = Some post-graduate courses, no degree	165	0.092	5.02		.025
Age (in years)	165	39.546		2.220	.028

* Degrees of Freedom = 1

Economic Variables

The promise of "free health care" has been a key benefit used to recruit soldiers for many years. But how important is that benefit? Are beneficiaries willing to pay out of their own pocket to have greater choice of where and from whom they receive their care? Does having other health insurance affect a persons choice of where they plan to seek care when TRICARE arrives at Fort Campbell? Several questions were added to the survey instrument to help determine the effects of economic factors on a persons TRICARE decision. The results of economic factors are shown in Table 2.

When asked if free care was important to them, 92.1% indicated that they agreed or strongly agreed with that statement. Respondents were less enthusiastic when asked if they were willing to give up some choice of who they see for their care in order to keep out-of-pocket costs low (only 64.2% agreed or strongly agreed). While free care appears to be very important, nearly 70% indicated a willingness to pay a small amount for their health care, and 34% indicated that the choice of where they received care was more important than how much that care cost.

When asked how much they were willing to pay for various services, the most frequent response was \$10 to \$20 for an office visit, an Emergency Room visit, and for laboratory and X-ray services. When asked how much they were

Table 2

Effects of Economic Variables on Intent to Select TRICARE Prime at BACH

Variable	n	Mean or Proportion	χ^2*	t	p Value
Have private health insurance	165	0.145	6.30		.012
Do not have other private or supplemental insurance	165	0.703	10.69		.001
Cost of insurance shared by family and current/former employer	165	0.107	6.99		.008
Willing to pay between \$21 to \$30 for prescription drugs	165	0.069	5.07		.024
Free care is important to me (Strongly agree = 5)	165	4.614		2.082	.039
Willing to have less choice of provider to minimize cost (Strongly agree = 5)	165	3.669		2.814	.006
Willing to pay more to have more choice of providers (Strongly agree = 5)	165	2.919		4.425	.000

* Degrees of Freedom = 1

willing to pay for prescription drugs, the majority (62.4%) were willing to pay less than \$10 for a 30 day supply of medication. Of the 20 variables asking respondents what they were willing to pay for care, only one, a willingness to pay between \$21 to \$30 for prescription drugs, reached statistical significance with intent to select TRICARE Prime. In fact, it was negatively correlated, indicating that those individuals willing to pay more for prescription drugs would tend to choose other TRICARE options.

When asked about insurance coverage, 27.8% indicated having either a CHAMPUS supplement or private health insurance coverage in addition to their military health care benefits. Of those reporting additional insurance coverage, the majority (29 of 46) pay the entire cost themselves, while the remainder, with the exception of one, share the cost with their employer.

Health Status Variables

The vast majority of respondents rated their health as good to excellent (91.4%), with most indicating their health was the same or better than one year ago (87.9%). While 46 (27.9%) reported experiencing moderate to severe bodily pain, only 7 (4.2%) indicated that their pain caused significant interference with their normal activities. Forty-seven respondents indicated that they or a family member have a significant medical problem requiring regular clinic visits or hospitalization. The majority (55.7%) made 5 or less visits to the doctor's office or Emergency Room in the past 12 months, while 17.6% made more than 11 visits during the same period. None of the 19 "perceived health status" variables reached statistical significance with intent to select TRICARE Prime.

Perceived Quality of Care Variables

Thirteen variable were used to measure respondents perception of the quality of care they received at BACH. Only those who answered "yes" to question 23, "have you received any medical care at Blanchfield Army

Community Hospital or a TMC in the past 12 months?", were asked to answer the questions related to perceived quality. In order to evaluate the relationship between each of these variables with intent to select TRICARE Prime, a filter was used to allow only those answering "yes" to question 23 to be included in the evaluation. This resulted in an "n" size of only 142. By applying the filter, the *p* values changed slightly from the original correlation values listed in Appendix E. Table 3 shows the revised *p* values and the *t*-test results.

Table 3

Effects of Perceived Quality of Care Variables on Intent to Select TRICARE Prime at BACH

Variable	n	Mean	<i>t</i>	<i>p</i> Value
Rate the skills, experience, and training of BACH providers (Excellent = 5)	142	3.268	2.188	.030
Rate the thoroughness of your treatment at BACH (Excellent = 5)	142	3.166	1.957	n.s.*
Rate the explanation you received of the medical procedures and tests (Excellent = 5)	142	3.290	2.351	.020
Rate the attention given to what you have to say (Excellent = 5)	142	3.169	2.322	.022
Rate the time the provider spends with you during a visit (Excellent = 5)	142	2.936	2.158	.033
Rate how much you were helped by the care you received at BACH (Excellent = 5)	142	3.136	2.035	.044
Rate the overall quality of care and services at BACH (Excellent = 5)	142	3.064	2.850	.005

*n.s. = not significant

The mean values for the 13 variables ranged from a low of 2.269 (slightly above “fair”) for the “ability to see the same provider for each visit” to a high of 3.421 (between “good” and “very good”) for “overall, how would you evaluate the health care you receive at Blanchfield and/or your TMC?” Most mean values were slightly above the “good” range. Of the 75 respondents who rated the “arrangements for choosing a personal provider”, 61.1% considered them to be “fair” or “poor.” Less than 20% found them to be “very good” or “excellent.” The mean for this variable was 2.333, which indicates a feeling that beneficiaries do not have a say in who they see for their health care at BACH.

Access Variables

As noted earlier, issues related to access have a strong influence on patient satisfaction and enrollment in HMOs (Rossitter et al. 1989; Spierer et al. 1994; Ribner 1995; Sachs and Pickens 1995; Rutledge and Nascimento 1996). Ten questions, numbers 25-33, and 45, used the same filter mentioned in the previous section to eliminate non-uses from the evaluation. Convenience of location and hours, primary care and Emergency Room access, and services available for getting prescriptions filled, all had mean ratings between “good” and “very good.” Specialty care access, the telephone appointment system, the time it takes to get an appointment, the waiting time in the clinics, and the availability of health care information by phone were all rated between “fair” and “good” (see Table 4 for results of access variables).

Four additional questions provided valuable information regarding access, although none appear to significantly impact on the TRICARE decision. When asked how long it took to get an appointment at BACH, only 39.2% (42.9% when filtering out non-users) indicated a wait of 7 days or less, the TRICARE standard for routine primary care appointments. Wait times in the clinic also failed to meet TRICARE standards with only 49.5% (54.2% when filtered) waiting 30 minutes or less in the clinics. Almost half of those responding to the survey indicated that it took over 15 minutes to drive to BACH. The final question asked participants their preference for clinic hours. Of particular interest was the potential demand for evening and Saturday clinics. Twenty-two (13.5%) preferred to receive care in the evenings and 8 (4.9%) preferred Saturday hours.

Table 4

Effects of Access Variables on Intent to Select TRICARE Prime at BACH

Variable	n	Mean	<i>t</i>	<i>p</i> Value
Rate the convenience of BACH's location (Excellent = 5)	142	3.790	3.659	.000
Rate the convenience of BACH's hours (Excellent = 5)	142	3.394	2.597	.010
Rate the services available for getting prescriptions filled at BACH (Excellent = 5)	142	3.188	3.016	.003

Marketing Variables

Of the 14 “marketing” variables included in the study, only 2 reached statistical significance (Table 5). Sixty-eight respondents indicated that they had a good understanding of TRICARE, 40 indicated they had a fair understanding, and 41 indicated a poor understanding of TRICARE. Those reporting an excellent understanding or no understanding of TRICARE accounted for 8 and 7 of the responses, respectively. Both a “poor” and a “fair” understanding of TRICARE were inversely correlated with the dependent variable in the study.

While Garfinkel found that small group meetings and personal mailings were highly effective marketing tools, there is no evidence in this study to support the belief that the source of TRICARE information significantly influenced a person’s choice of plan options (Garfinkel et al. 1986). Respondents identified the ARMY Times and the post newspaper as their primary sources of information on TRICARE.

Table 5

Effects of Marketing Variables on Intent to Select TRICARE Prime at BACH

Variable	n	Proportion	χ^2*	p Value
Good understanding of TRICARE	165	0.415	11.66	.001
Fair understanding of TRICARE	165	0.244	4.80	.029

* Degrees of Freedom = 1

"Other" Variables

The remaining items on the questionnaire were primarily related to health care utilization. Item 4 asked for the participant's usual source of care. Over 80% stated that they usually received care through BACH or a TMC. This is reasonably consistent with the responses to items 7a and 23 which found that 76.1% received care at BACH in the past 12 months (item 7a) and 86% indicated care at BACH or a TMC in the past 12 months (item 23). Each question was worded slightly different, which probably accounts for the slight difference in responses (Table 6).

Table 6

Effects of "Other" Variables on Intent to Select TRICARE Prime at BACH

Variable	Proportion	χ^2*	p Value
Usually receive care at BACH or TMC	0.765	9.15	.002
Usually receive care at BACH Emergency Room	0.043	4.77	.029
Usually receive care at a civilian doctor's office	0.086	13.65	.000
Usually receive care at a civilian hospital	0.019	4.67	.031
Do not have a regular source of care	0.049	4.42	.036
Receive most of your health care for BACH in the past 12 months	0.761	10.28	.001
Receive most of your health care at BACH or TMC in the past 12 months	0.860	4.74	.029

n = 165

*Degrees of Freedom = 1 for all Chi-square tests

Those routinely seeking care in civilian doctor's offices or hospitals, and those with no regular source of care were less likely to select TRICARE Prime.

The primary reasons respondents cited for not using BACH were: 1) not needing care in the past 12 months (25.6%), 2) BACH lacked the needed services (18%), 3) too hard to get an appointment at BACH (18%), 4) wait too long to see a provider at BACH (18%), 5) BACH staff is rude (15.4%), 6) exams are not thorough at BACH (15.4%), and 7) prefer other source of care (15.4%).

IV. DISCUSSION

The purpose of this study was to provide the Commander with an initial estimate of TRICARE enrollment at BACH. Additionally, and equally important, was to determine what factors might influence a beneficiary's decision to select this TRICARE option, and which of those factors the Commander could influence to optimize enrollment in TRICARE Prime. It was hoped that enough surveys would be returned to allow for comparisons between the five beneficiary categories selected for the study (junior enlisted, senior enlisted, junior officer, senior officer, and retirees). Unfortunately, the low return rate did not allow for such comparisons.

The results of the survey indicate that the Commander can expect about 60% of the eligible beneficiary population to select TRICARE Prime. This is consistent with DoD's estimate of 64% for Region 5 (Regions 2 & 5, Request for Proposal). It is difficult to determine how this translates into actual enrollees, since enrollment is typically done by family units. If more large families select TRICARE Prime, enrollment will be higher than if predominantly smaller families select this option. This also does not account for the fact that all 23,900 active duty soldiers will automatically be enrolled in TRICARE Prime. Using a straight 60% of eligible beneficiaries, TRICARE Prime enrollment should be approximately 47,650 ($79,411 \times .6 = 47,646$). If active duty are first removed

from the equation and then added back in to the total, enrollment would be roughly 57,200 ($55,511 \text{ non-active duty} \times .6 = 33,307 + 23,900 \text{ active duty} = 57,207$). Since active duty are not offered a choice of options, the second estimate is more likely to reflect actual enrollment.

Demographic Factors

Findings related to demographic factors were consistent with those of other studies. Previous studies found that larger families are often attracted to HMOs, as seems to be the case in this study (Ashcraft et al. 1978; Welch and Frank 1986; Shimshak, Defuria, and Getson 1988). Those with 2 or 4 children are more likely to choose TRICARE Prime. No explanation, other than possible sampling error, can be found for those with 3 children being negatively correlated with selecting TRICARE Prime, and not reaching statistical significance.

The influence of one's education level on the TRICARE decision is confusing at first glance. Those with college degrees are more likely to select TRICARE Prime, while those with some post-graduate studies are less likely to select that option. Although not reaching statistical significance, those with post-graduate degrees, in turn, seem more likely to select TRICARE Prime. One explanation for this wavering may be that those possessing post-graduate degrees are predominantly senior officers (29 of 36) who may be loyal to the health care system they have used most of their career. In addition, this group is probably

heavily weighted toward the medical or dental profession, since the majority of senior officers on post work at either BACH or at one of the dental clinics. This again may indicate a loyalty to their own health care system. On the other hand, most of those with some post-graduate education are either junior officers or retired senior enlisted soldiers. The retirees may feel disenfranchised from BACH, while the junior officers may not have developed a sense of loyalty to the military health care system.

Contrary to the notion that retirees want to be seen in the MTF, older beneficiaries are less likely to select TRICARE Prime than are younger ones. This may be the result of a systematic effort, over the past several years, to make it more difficult for retirees to receive care at MTFs. Another explanation could be that the relatively low response rate of young enlisted soldiers and officers may not truly represent that portion of the study population.

Economic Factors

Respondents overwhelmingly indicated that "free" health care was important to them (73.9% strongly agreed with that statement). But, when asked if they were willing to give up some choice of who they see in order to minimize their health care cost, they were less enthusiastic (only 64.2% agreed or strongly agreed). These conflicting values will undoubtedly make the TRICARE decision difficult for some beneficiaries. Some have already demonstrated their

willingness to share the cost of their health care by purchasing a CHAMPUS supplemental insurance policy or private health insurance. Some bear the entire cost of these policies themselves, while others share the cost with a current or former employer.

Those individuals who reported having private health insurance were less likely to choose TRICARE Prime. Most of these individuals shared the cost of coverage with their employer. Consequently, the variable COSTSHAR was also negatively correlated with the PRIMEMTF variable. This finding was not unexpected since those individuals who are willing to pay for private health insurance probably do so because they value the added choice provided by this coverage.

On the other hand, those with no private or CHAMPUS supplemental health coverage were more likely to select TRICARE Prime. These individuals are probably either unable or unwilling to spend money for health insurance when they have a "free" system available to them. Marketing efforts showing the cost benefits of TRICARE Prime should be targeted at this group.

Four items on the questionnaire asked participants to indicate how much they were willing to pay for an office visit, for an Emergency Room visit, for laboratory and x-rays, and for prescription drugs. Most were willing to pay up to \$20 for each of the four services (87.1%, 67.7%, 78.8%, and 90.2% respectively).

This seems to contradict the claim that free care is important to nearly all respondents. The expectation would be that most would be unwilling to pay anything for care, but this was not the case. One explanation may be that active duty and retired military personnel are seeing their benefits erode and they view TRICARE as another example of this erosion. While they value free care, they do not expect to have it in the future and, being offered the opportunity, are simply stating the maximum amount they are willing to pay for these services.

Interestingly, only one variable, being "willing to pay between \$21 and \$30 for prescription drugs", had a statistically significant relationship to intent to select TRICARE Prime. Why this variable and no others influence the TRICARE decision is puzzling. A possible explanation is that, unlike the other services, most people are only willing to pay up to \$10 for prescription drugs, and those few who are willing to pay more than \$20 are people who place a very high premium on having a choice in their health care decision. Also, since retirees are often on multiple medications for long periods of time, they would favor lower costs for prescription drugs. This leaves the younger, healthier, and wealthier who are willing to pay more to guarantee their choice health care decisions.

Perceived Quality of Care Factors

To this point, the Commander has had little opportunity to manipulate any of the factors which may influence a beneficiary's TRICARE decision. He can

not change someone's age, family size, educational level, or economic status. But he can have an impact on their perception of the quality of care provided at BACH, on certain aspects of access to care, and on the effectiveness of the TRICARE marketing effort. The perception of the quality of care at BACH will be addressed in this section.

Each of the statistically significant quality of care variables had a positive relationship with intention to select TRICARE Prime. Those giving BACH high ratings were more likely to select TRICARE Prime, while those who gave low ratings were more likely to select another option. This appears to be common sense, but what this means to the Commander is that, anything he can do to improve beneficiaries' perceptions in these areas should pay off in higher enrollment at BACH. The problem right now is that the average rating for most of these areas is only slightly above "good." It is questionable whether being considered "good" is sufficient to convince a majority of beneficiaries to sign up for TRICARE Prime.

Underlying almost all of these factors are the interpersonal relationships between the patient and the hospital staff (provider and non-provider alike). Patients want the staff to treat them with respect and dignity and they want them to take time to listen to their concerns. Patients also want to participate in their health care by knowing what is being done and why. These very factors echo the

findings of previous research on patient satisfaction and enrollment in HMOs (Shimshak, Defuria, and Getson 1988; Rossiter et al. 1989; Margo and Margo 1990; Spierer et al. 1994; Ribner 1995; Sachs and Pickens 1995; Rutledge and Nascimento 1996).

While not reaching statistical significance, respondents rated the ability to see the same provider for each visit very low (2.269 on a 5 point scale). While continuity of care is sometimes difficult to achieve in a military setting, previous studies found that it has a positive influence on patients' perceptions (Davies et al. 1986; Spierer et al. 1994). This is supported by the fact that over 10% of the non-BACH users, who responded to the survey, cited the inability to see the same provider as one of the reasons they did not seek care at BACH. Continuity of care is another area where the Commander can focus efforts to improve patient satisfaction.

The patient's perception of a provider's clinical competence may also affect his satisfaction level. This was the finding of two previous studies (Rossiter et al. 1989; Burns and Wholey 1991). The current study shows a similar relationship with intent to select TRICARE Prime. If the Commander can "market" the experience, expertise, and training of BACH providers, this could pay dividends in increased enrollment. Likewise, enrollment can be influenced by highlighting the quality of the care and services provided by BACH. As the

marketing efforts for TRICARE reach full stride this fall, great emphasis should to be placed on promoting the staff, facilities, and services of BACH.

Access Factors

The influence of access on enrollment and patient satisfaction is well documented in the literature (Berki and Ashcraft 1980; Davies et al. 1986; Margo and Margo 1990; Ribner 1995; Rutledge and Nascimento 1996). In general, beneficiaries are satisfied with the convenience of BACH's location. Only 10% of those who answered this item rated the location as "poor" or "fair." Most of these individuals lived at least 15 minutes away from BACH. While little, if anything, can be done to influence where people live in relation to BACH, marketing the cost benefit and quality of services at BACH may minimize the negative effects of the inconvenient location.

Overall, respondents rated the convenience of BACH's hours as "good." Since the survey was sent out, Primary Care Services has opened an evening clinic. Over 13% of those completing the survey indicated that evenings were their preferred time to be seen. Plans for a Saturday clinic are being discussed and should further improve beneficiary satisfaction with BACH's hours. According to the survey, opening a Saturday clinic should translate into increased enrollment.

How an individual perceives the availability of pharmacy services may also impact on his choice of TRICARE options. The time it takes to get a

prescription filled, the hours of operation, the availability of needed medications, and the courtesy of the staff all shape the impression an individual has of BACH's pharmacy services. Unfortunately, the research design did not reveal the specific aspects of the process which most affect beneficiaries ratings. Since there is a correlation between a beneficiary's perception of pharmacy services and the specific TRICARE option he will select, a further study of this relationship may reveal specific areas for improvement which will enhance beneficiaries' perceptions of this service.

Quite surprising was the limited impact that access to primary care, specialty care, and medical care in an emergency had on the TRICARE Prime enrollment decision. This finding is also true with respect to the telephone appointment system, the length of time it takes to get an appointment, and the time spent waiting in the clinic. The finding makes more sense when one considers that only current BACH users were asked to address these items on the questionnaire. Those who would be most affected by poor perceptions with regard to these factors have already chosen to seek care elsewhere. Those users who gave lower ratings on these items may simply choose to put up with the inconveniences because the alternatives are even less appealing. Even though they failed to reach statistical significance, common sense and evidence from previous research would indicate that any effort to improve beneficiary's

perceptions in these areas can only solidify the decision in the minds of those intending to select TRICARE Prime.

Marketing Factors

Only 2 variables, having a “pretty good” and having a “fair” understanding of TRICARE, reached statistical significance, but both the UNDREXCL and UNDRGOOD variables were positively correlated with the dependent variable. Conversely, the variables UNDRFAIR, UNDRPOOR, AND NOUNDER were negatively correlated with the dependent variable. These results seem to indicate that the more people know about TRICARE, the more likely they are to choose TRICARE Prime. This is consistent with previous research showing a positive relationship between understanding a health plan’s characteristics and enrollment in prepaid plans. Enrollees with a good knowledge of a plan’s benefits package are also less likely to disenroll because of misunderstandings (Garfinkel et al. 1986; Rossiter et al. 1989).

In an attempt to determine which media was most effective in getting the TRICARE message across, survey participants were asked to identify which source(s) of information had provided them with their current understanding of the program. Although none of the variables reached statistical significance, the post newspaper and the Army Times were the most commonly reported sources of information by survey respondents. In his study, Garfinkel identified small group

and personal mailings as effective media for increasing enrollment in HMOs, but no such relationship was found in this study (Garfinkel et al. 1986).

"Other" Factors

The remaining variables focused on beneficiaries utilization of the health care system. Based on the responses to these questions, present utilization patterns appears to be a significant predictor of whether or not beneficiaries will select TRICARE Prime. Those individuals who currently use BACH facilities for health care are more likely to select TRICARE Prime. Over two-thirds (67.4%) of current users intend to stay with BACH when TRICARE comes to the area. Conversely, those currently using other sources for their care are more likely to select another TRICARE option. In fact, of the 19 respondents who reported using civilian doctors or hospitals for their health care, only 2 plan to enroll in TRICARE Prime. Therefore, any efforts to discourage TRICARE-eligible beneficiaries from using BACH may have detrimental effects on future enrollment in TRICARE Prime.

V. RECOMMENDATIONS AND CONCLUSION

The results of this study demonstrate that the decision to select TRICARE Prime is influenced by a multitude of factors, some of which are still undiscovered by scope of this research effort. What this project does provide is a validation of many of the relationship which were already suspected to influence patient satisfaction, and ultimately the TRICARE decision. It has also revealed some new areas that the Commander can use to better "market" BACH as it moves closer to implementing TRICARE.

From the Commander's perspective, an individual's intent to enroll in TRICARE Prime can best be influenced by focusing on three areas of concern. According to the study findings, each area has the potential to positively or negatively impact enrollment.

First, present marketing efforts must continue and should intensify in the coming months. Efforts to promote a general awareness of TRICARE, and BACH's role in the program, can be accomplished through advertising and public relations channels. This can be done through the use of newspaper articles, direct mailings, and the BACH's Internet home page. Due to the complexity of the TRICARE program, the campaign of "personal selling" to small groups should also continue (Hillestad and Berkowitz 1991). In-processing briefings, family support groups, town hall meetings, pre-retirement briefings, and Officer/Non-

commissioned Officer Professional Development programs are some of the forums where specific details of the program can be addressed on an individual basis. This is critical since a better understanding of the program increases the likelihood that the beneficiary will select TRICARE Prime.

A second area of concern which may affect enrollment is the beneficiary's perception of the quality of the care provided at BACH. This perception is particularly influenced by the patient-provider relationship. The time a provider spends with the patient, the attention the provider pays to the patient's concerns, and the time the provider takes to explain tests and procedures to the patient all impact on patient satisfaction and ultimately may persuade beneficiaries to stay with BACH when TRICARE arrives. Another way in which the Commander can increase a beneficiary's perceptions of quality is by promoting the skills, experience, and training of BACH providers. Articles in the post newspaper, hand-outs in the clinics, and other promotional material can be used to make beneficiaries aware of the excellent qualifications of BACH's providers.

Finally, improving access to care increases the chances that beneficiaries will seek care at BACH when TRICARE begins next year. The study indicated that current users are more likely to select TRICARE Prime than are non-users. Any systematic efforts to discourage TRICARE eligible beneficiaries from using BACH could decrease enrollment in the future. Continued efforts to improve

access through expanded clinic hours, such as appointments in the evenings and on weekends, will improve beneficiaries perception of access and increase potential enrollment in the future.

Limitations of the Study

There are several limitations which must be considered when interpreting the results of this research. Each may affect the potential utility of study's findings.

First, the findings of this study apply only to beneficiaries residing in the BACH catchment area at the time of the survey and cannot be generalized to other military catchment areas. While the survey respondents represent a diverse group of beneficiaries, the unique nature of BACH's catchment area population, the services offered by BACH, and the particular make up of the civilian health care community preclude the broad application of these results.

Another limitation arises from the relatively small return rate for the survey. Nearly 1000 questionnaires were distributed, but only 165 of those which were returned could be used in the study. Only 11 junior enlisted soldiers or their spouses returned the questionnaires. Since this group makes up one of the largest beneficiary categories in the survey, it is questionable whether the results can be extrapolated to this group. Davies and Ware suggest that at least 100 responses are needed from each category in order "to detect moderate to large differences in

consumer's evaluations" (Davies and Ware 1991). None of the 5 study categories returned more than 56 surveys.

Selection bias is always a concern in conducting surveys. Since it would be impossible to survey 100% of the catchment area beneficiaries, there is always a question whether the subjects who responded actually represent the population as a whole. In this study's favor, the use of a stratified random sample increases the probability that respondents' answers fairly represent the opinions of the general population.

A fourth limitation of the study has to do with its timing. TRICARE is not set to begin at Fort Campbell until May 1998. The rapid turnover of personnel at Fort Campbell, coupled with operational changes already occurring at BACH, may quickly render the results obsolete.

Recommendations for Future Research

Several item on the survey asked respondents to incorporate a year's worth of experience into one answer (e.g. rate the "courtesy shown to you by BACH staff members"). There is concern that the "halo effect", the influence of someone's most recent experience, may bias the responses to these questions. How the most recent visit, whether good or bad, affects the overall response to a question is uncertain. The effects of this phenomenon could be reduced by conducting a longitudinal study, resurveying on an annual or semi-annual basis,

and comparing the results for changes. Another option would be to administer a “visit specific” survey which focuses on individual encounters. A combination of these two methods would allow the Commander to observe trends (longitudinal study) and also identify specific trouble spots which require immediate attention (visit specific study).

Along with asking the survey participants to lump many visits into one answer, several questions related to access lumped many clinics together. In order to determine if specific clinics are effecting the overall opinions of beneficiaries, a “clinic specific” survey should be conducted to evaluate satisfaction with access at the clinic level.

As mentioned earlier, because enrollment may be affected by beneficiaries perception of BACH’s pharmacy services, the Commander should conduct a study of this service. The study should include a survey of beneficiaries. The purpose would be to identify specific aspects of the process of receiving medications which can be improved to increase overall satisfaction with the service.

Conclusion

The purpose of this study was two-fold. The primary purpose was to provide the commander with an initial estimate of enrollment in TRICARE Prime. The second purpose was to identify factors that might affect a beneficiary’s

decision to select TRICARE Prime and, more importantly, to determine which factors the commander could influence in order to increase the chances that beneficiaries will choose TRICARE Prime when the time comes.

Regarding an initial estimate of enrollment, the study findings were in line with Region 5 estimates. The survey indicated that 60% of respondents intend to select TRICARE Prime at BACH, while Region 5 estimates 64% enrollment (Regions 2 & 5, Request for Proposal). This equates to roughly 57,200 individuals who will require primary care managers at BACH.

Numerous variables were significantly related to the intent to select TRICARE Prime at BACH. Of the seven categories of variables (demographic, economic, health status, perceived quality of care, access, marketing, and “others”), only health status had no statistically significant variables. The commander can do little, if anything, to influence the demographic or economic status of beneficiaries in the Fort Campbell catchment area. What he can influence is the beneficiary’s perception of the quality of care provide at BACH, the access to that care, and the knowledge that beneficiaries have of the TRICARE program. By focusing on these areas, he can both solidify the decision of those already intending to select TRICARE Prime and encourage others to consider this option when the time comes.

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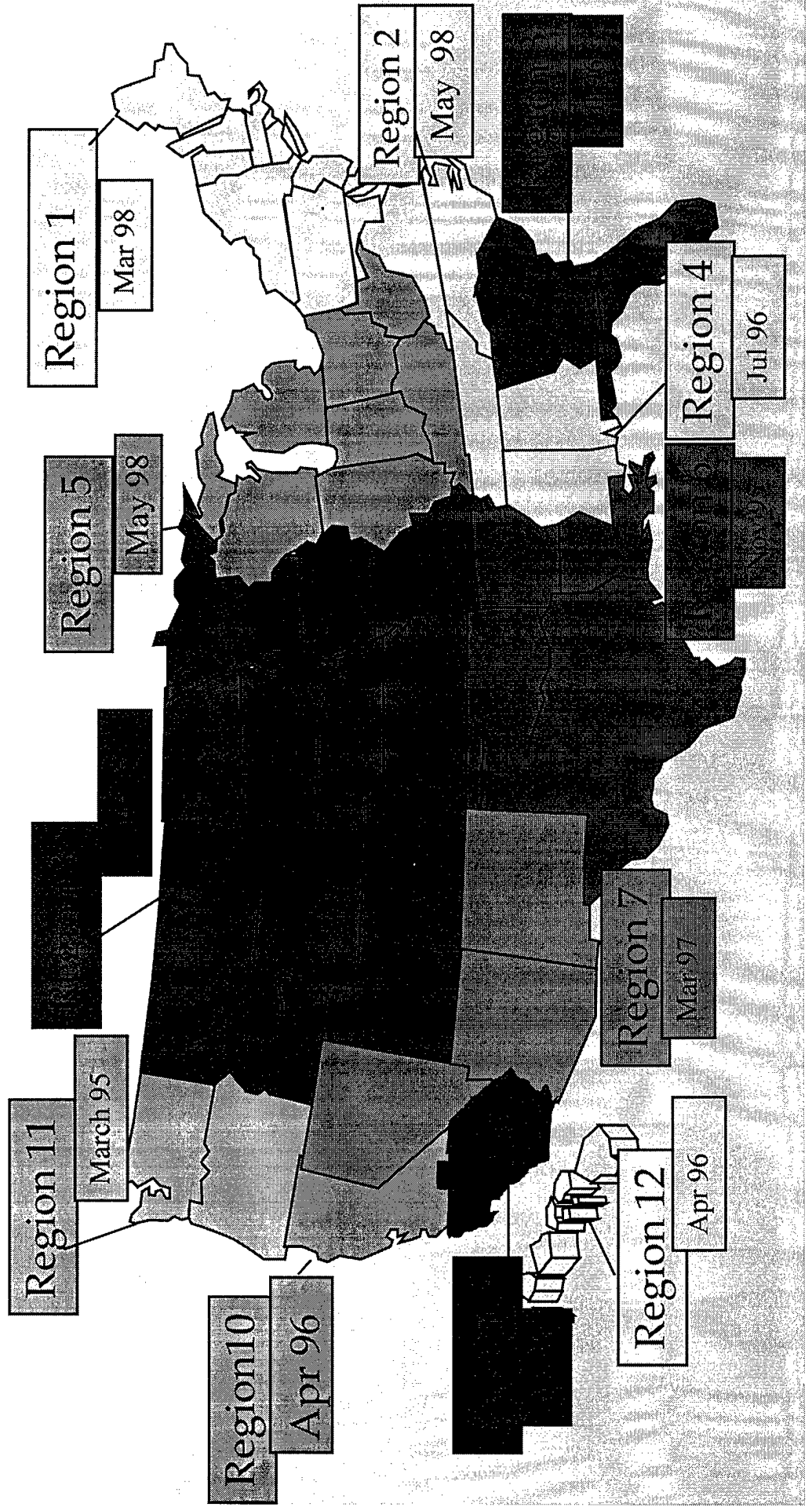
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APPENDIX A
TRICARE MAP

AAA HEALTH CARE REGIONS

T R I C A R E



APPENDIX B

TRICARE PRE-ENROLLMENT SURVEY



BLANCHFIELD ARMY COMMUNITY HOSPITAL

TRICARE PRE-ENROLLMENT SURVEY



INSTRUCTIONS

Purpose of the Survey

According to current time tables, Fort Campbell, KY is scheduled to begin health care delivery under TRICARE on February 1, 1998. Under TRICARE, military beneficiaries will have several options as to where they will receive medical care. These options are briefly explained in the enclosed brochure.

In order to prepare for TRICARE, the hospital needs to better understand the characteristics of those beneficiaries who want to receive their medical care at Blanchfield Army Community Hospital when TRICARE begins here. This information will be used to plan staffing requirements, develop new programs and modify existing programs. Your response to this survey will help us make better estimates and provide more accurate information on the needs of our beneficiaries.

How to Complete the Survey

To provide the best results for the survey, the family member who typically makes the health care decisions for your family should complete the survey. If you are married and make these decisions jointly, please sit down with your spouse and discuss the questions and answer them together.

Prior to completing the survey, please read the enclosed brochure. The brochure provides a brief explanation of the health benefits offered under TRICARE, the Department of Defense triple option health benefits program for the uniformed services.

Once you have read the brochure, please complete the survey. Read each question carefully. Using a pencil, mark your answers by placing a ✓ in the appropriate circle (Example: Ⓐ). If you change a response, please erase the incorrect response completely and mark your new choice. **UNLESS OTHERWISE INDICATED, MARK ONLY ONE ANSWER PER QUESTION.** Once you begin, the survey will take about 15 to 20 minutes to complete if you answer every question.

While some questions may seem very personal, they are important to the study. Accurate estimates can be made only if most participants answer all the questions in the survey. However, you can choose not to answer particular items. **Please do not discard the entire survey because there are some particular items that you want to skip.**

Anonymity

Your response to this survey will remain anonymous. To ensure that individuals cannot be identified by their unique responses, the data will be combined with the information from all other participants who respond to the survey.

When you complete the survey, please fold it along the dotted lines and place it in the enclosed envelop. You may return it by mail, or active duty military may return the survey through post distribution.

If you have any questions about the survey, please call MAJ Doug Brandsma at 798-8048.

Thank you for taking the time to complete this survey!



TRICARE PRE-ENROLLMENT SURVEY

1. How would you rate your current understanding of TRICARE?

- ☐ I have an **excellent** understanding of TRICARE
- ☐ I have a **pretty good** understanding of TRICARE, but still have **some** questions
- ☐ I have a **Fair** understanding of TRICARE, but still have **many** unanswered questions
- ☐ I know **very little** about TRICARE and need more information before making an informed decision
- ☐ This is the first time I have heard about TRICARE

2. Other than the material provided with this survey, where else have you heard about TRICARE? (CHECK ALL APPROPRIATE SOURCES)

- ☐ Command briefings
- ☐ Town hall meetings
- ☐ Family Support Group meetings
- ☐ Pre-retirement briefings
- ☐ Post newspaper
- ☐ ARMY Times
- ☐ Previous experience with TRICARE at another post
- ☐ Personal mailings to my home
- ☐ Others (Please specify) _____

3. Based on your current knowledge of TRICARE, which option do you plan to select?

- ☐ TRICARE Prime (with medical care provided by Blanchfield Army Community Hospital)
- ☐ TRICARE Prime (with medical care provided by contracted civilian providers in your community)
- ☐ TRICARE Extra (Preferred Provider option - 5% discount off of CHAMPUS allowable charges)
- ☐ TRICARE Standard (Similar to current CHAMPUS Standard option)
- ☐ Do not plan to use TRICARE, I have other insurance

4. Which of the following places do you **USUALLY** go when you are sick or need advice about your health? (MARK ONLY THE ONE BEST ANSWER)

- ☐ Blanchfield Army Community Hospital clinics or Troop Medical Clinics at Fort Campbell
- ☐ Blanchfield Army Community Hospital Emergency Room
- ☐ Veteran's Administration (VA) hospital outpatient clinic
- ☐ Civilian doctor's office
- ☐ Civilian hospital or clinic
- ☐ Civilian hospital Emergency Room
- ☐ Other Source (Please specify) _____
- ☐ I do not have a usual source of care
- ☐ Don't know

5. Is your family currently covered by any of the following health insurance programs? (MARK ALL THAT APPLY)

- ☐ CHAMPUS
- ☐ Medicare
- ☐ Supplemental insurance (a policy that helps cover what you owe after CHAMPUS or Medicare pays its share)
- ☐ Private health insurance (Example: Federal Employee Health Benefits (FEHB), AARP, Prudential, Blue Cross/Blue Shield, Health Maintenance Organization (HMO), etc.)
- ☐ Other (Specify) _____
- ☐ Don't know

6. If you are covered by supplemental or private health insurance (as described in question #5 above), who pays for this insurance?

- ☐ Does not apply; do not have private health insurance
- ☐ Cost paid entirely by myself or my family
- ☐ Cost shared by my family and current or former employer
- ☐ Cost paid entirely by current or former employer
- ☐ Other (Specify) _____

7a. Did you receive most of your medical care from Blanchfield Army Community Hospital (BACH) during the past 12 months?

- ☐ Yes ➡ (IF YES, GO TO QUESTION 8)
- ☐ No

7b. What reason (or reasons) explain why you **did not** receive most of your medical care from Blanchfield Army Community Hospital during the last 12 months?

- ☐ I have not needed health care services in the past 12 months
- ☐ Blanchfield Army Community Hospital lacks the services I need
- ☐ Blanchfield Army Community Hospital personnel have been rude to me
- ☐ Blanchfield Army Community Hospital providers are not very thorough in their examinations
- ☐ I do not get to see the same provider each time I go to Blanchfield Army Community Hospital
- ☐ Blanchfield Army Community Hospital care is not as good as civilian care
- ☐ My schedule conflicts with the times that Blanchfield Army Community Hospital offers care
- ☐ I live too far from Blanchfield Army Community Hospital
- ☐ It is too hard to get an appointment at Blanchfield Army Community Hospital
- ☐ I wait too long to see a provider at Blanchfield Army Community Hospital
- ☐ I was referred or sent by Blanchfield Army Community Hospital to a civilian facility
- ☐ I simply prefer another source of care
- ☐ Other reason (Specify) _____

Respond to the following statements or questions related to the cost of medical care

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
8. Having free medical care is important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I am willing to have less choice of who I see for my health care in order to keep my out of pocket cost to a minimum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I would be willing to pay a small amount for my medical care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Having a choice where I go for medical care, and who I see, is more important to me than how much I pay for that care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | \$0 | Less
than \$10 | \$10 to
\$20 | \$21 to
\$30 | More
than \$30 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 12. What is the most you are willing to pay for an office visit? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. What is the most you are willing to pay for an Emergency Room visit? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. What is the most you are willing to pay for laboratory and X-ray services? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. What is the most you are willing to pay for prescription drugs?
(Up to a 30 day supply) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(Note: Your responses to questions 12 through 15 are for the purpose of this survey only and will not be used to set fees under TRICARE).

The following questions relate to your health or the health of your family members.

16. In general, would you say your health is

- ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

17. Compared to one year ago, how would you rate your health in general now?

- ☐ Much better now than one year ago
☐ Somewhat better now than one year ago
☐ About the same
☐ Somewhat worse now than one year ago
☐ Much worse now than one year ago

18. How much bodily pain have you had during the past 4 weeks?

- ☐ None ☐ Very mild ☐ Mild ☐ Moderate ☐ Severe ☐ Very Severe

19. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

- ☐ Not at all ☐ A little bit ☐ Moderately ☐ Quite a bit ☐ Extremely

20. My health is excellent

- ☐ Definitely true ☐ Mostly true ☐ Don't know ☐ Mostly false ☐ Definitely False

21. Do you or someone living with you have significant medical problems which require regular clinic visits or hospitalization?

- ☐ Yes
☐ No

22. Approximately how many visits to a doctor's office and/or Emergency Room have you and your family members made in the past 12 months?

- ☐ None ☐ 1 to 5 Visits ☐ 6 to 10 Visits ☐ 11 to 20 Visits ☐ More than 20 Visits

23. Have you received any medical care at Blanchfield Army Community Hospital or a TMC in the past 12 months?

- ☐ Yes
☐ No → (IF NO, GO TO QUESTION 47)

Survey continues on back of this page

24. Overall, how would you evaluate the health care you receive at Blanchfield and/or your TMC?

○ Excellent

☐ Very Good

☐ Good

○ Fair

☐ Poor

Questions 25-46 ask you to rate the medical care you and your family received from Blanchfield Army Community Hospital or one of the Fort Campbell Troop Medical Clinics (TMC) during the past 12 months.

[illegible]

47. How long do you **usually** wait between the time you make an appointment for care and the day you actually see the provider?

- ☐ I have not made an appointment at Blanchfield or a TMC during the past 12 months
- ☐ 2 days or less
- ☐ 3 to 7 days
- ☐ 8 to 14 days
- ☐ 15 to 28 days
- ☐ More than one month, but less than 2 months
- ☐ More than 2 months

48. How long do you **usually** have to wait in the clinic to see your provider when you have an **appointment** for care?

- ☐ I have not had an appointment at Blanchfield or a TMC during the past 12 months
- ☐ I usually use the walk-in clinic
- ☐ Less than 10 minutes
- ☐ 11 to 15 minutes
- ☐ 16 to 30 minutes
- ☐ 31 to 45 minutes
- ☐ 46 minutes to 1 hour
- ☐ More than one hour, but less than 2 hours
- ☐ 2 hours or more

49. How long does it take you to get to Blanchfield Army Community Hospital from your home?

- ☐ Under 5 minutes
- ☐ 5 to 10 minutes
- ☐ 11 to 15 minutes
- ☐ 16 to 24 minutes
- ☐ More than 25 minutes

50. When would you **prefer** to see a health care provider for your medical care?

- ☐ Before 8 a.m.
- ☐ 8 a.m. to noon
- ☐ Noon to 5 p.m.
- ☐ 5 p.m. to 9 p.m.
- ☐ Saturdays

The final section of this survey asks for additional information which will help us better understand the difference in responses between beneficiaries groups. The information gathered will in no way be used to identify you personally.

51. How old were you on your last birthday? _____

52. Are you?

- ☐ Male
- ☐ Female

53. Which category best describes you?

- ☐ Active duty service member
- ☐ Family member of active duty service member
- ☐ Retired service member
- ☐ Family member of retired/deceased service member
- ☐ Other (Please specify) _____

54. Specify your (or your active duty spouse's) pay grade.

- | | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|--------------------------------|
| <input type="radio"/> E-1 | <input type="radio"/> E-6 | <input type="radio"/> W-1 | <input type="radio"/> O-1 | <input type="radio"/> O-6 |
| <input type="radio"/> E-2 | <input type="radio"/> E-7 | <input type="radio"/> W-2 | <input type="radio"/> O-2 | <input type="radio"/> O-7 |
| <input type="radio"/> E-3 | <input type="radio"/> E-8 | <input type="radio"/> W-3 | <input type="radio"/> O-3 | <input type="radio"/> O-8 |
| <input type="radio"/> E-4 | <input type="radio"/> E-9 | <input type="radio"/> W-4 | <input type="radio"/> O-4 | <input type="radio"/> Not sure |
| <input type="radio"/> E-5 | | <input type="radio"/> W-5 | <input type="radio"/> O-5 | |

55. Specify your (or your active duty spouse's) branch of service.

- ☐ Army
- ☐ Air Force
- ☐ Navy
- ☐ Marine Corps
- ☐ Coast Guard
- ☐ Other (Please specify) _____

56. Which of the following best describes your current marital status?

- ☐ Married
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Never married

The Department of Defense defines eligible children as unmarried children, including adopted children or stepchildren, who are legally dependent on you **for over half their support** AND (1) are not yet 21 years old, OR (2) attend college and are not yet 23 years old, OR (3) are of any age and have a mental or physical handicap.

57. According to the above definition, how many eligible children are currently living with you?

- ☐ None
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four
- ☐ Five
- ☐ Six or more

58. Approximately what was your family's total income last year before taxes? (include your's and your spouse's income)

- ☐ Less than \$10,000
- ☐ \$10,000 to \$19,999
- ☐ \$20,000 to \$29,999
- ☐ \$30,000 to \$39,999
- ☐ \$40,000 to \$49,999
- ☐ \$50,000 to \$59,999
- ☐ \$60,000 to \$69,999
- ☐ \$70,000 to \$79,999
- ☐ \$80,000 or more

59. What is your highest grade or academic degree completed?

- ☐ Less than 12 years of school (no diploma)
- ☐ High school diploma or equivalent (example: GED)
- ☐ Some college level courses
- ☐ College graduate
- ☐ Some post-graduate work
- ☐ Post-graduate degree (Master's, doctoral, or professional school degree)

60. Which of the following best describes your racial or ethnic background?

- ☐ Black/African American
- ☐ Indian (American)/Native American
- ☐ Hispanic/Spanish
- ☐ Asian or Pacific Islander
- ☐ Caucasian
- ☐ Other (Please specify) _____

61. How long have you lived in the Fort Campbell area?

- ☐ Less than 6 months
- ☐ 6 to 12 months
- ☐ 1 to 3 years
- ☐ More than 3 years

62. What is your home zip code? _____

APPENDIX C

STUDY VARIABLES AND THEIR OPERATIONAL DEFINITIONS

Appendix C

Study Variables and their Operational Definitions

Name	Operational Definition
------	------------------------

Dependent Variable

PRIMEMTF Plan to enroll in TRICARE Prime at BACH (Yes=1)

Independent Variables

UNDREXCL Excellent understanding of TRICARE (Yes=1)

UNDRGOOD Good understanding of TRICARE (Yes=1)

UNDRFAIR Fair understanding of TRICARE (Yes=1)

UNDRPOOR Very little understanding of TRICARE (Yes=1)

NOUNDER No understanding of TRICARE (Yes=1)

SOURCCB Have heard about TRICARE from Command Briefings (Yes=1)

SOURCTHM Have heard about TRICARE from Town Hall Meetings (Yes=1)

SOURCFSG Have heard about TRICARE from Family Support Group
(Yes=1)

SOURCPRB Have heard about TRICARE from Pre-retirement Briefing
(Yes=1)

SOURCPN Have heard about TRICARE from the post newspaper (Yes=1)

SOURCAT Have heard about TRICARE from the Army Times (Yes=1)

SOURCEXP Have previous experience with TRICARE (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
SOURCPM	Have heard about TRICARE from personal mailings (Yes=1)
SOURCOTH	Have heard about TRICARE from other sources (Yes=1)
PRIMECON	Plan to enroll in TRICARE Prime with Contractor (Yes=1)
EXTRA	Plan to use TRICARE Extra (Yes=1)
STANDARD	Plan to use TRICARE Standard (Yes=1)
NOTRICAR	Do not intend to use TRICARE (Yes=1)
BACHTMC	Usually receive care at BACH or TMC (Yes=1)
BACHER	Usually receive care at BACH ER (Yes=1)
VA	Usually receive care at the VA (Yes=1)
CIVILMD	Usually receive care at a civilian doctor (Yes=1)
CIVHOSP	Usually receive care at civilian hospital or clinic (Yes=1)
CIVILER	Usually receive care at a civilian hospital ER (Yes=1)
OTHRSRC	Usually receive care from another source (Yes=1)
NORGLR	Do not have a regular source of care (Yes=1)
UNKNOWN	Do not know where my care is usually received (Yes=1)
INSCHAMP	Has CHAMPUS coverage (Yes=1)
INSMEDCR	Has Medicare insurance (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
INSSPLMT	Has a supplemental insurance policy (Yes=1)
INSPRVT	Has private insurance (Yes=1)
INSOTHER	Has other form of coverage (Yes=1)
INSUNKNW	Do not know if covered by insurance (Yes=1)
INSNTAPL	Do not have private insurance (Yes=1)
PAYALL	Insurance premiums paid entirely by member (Yes=1)
COSTSHAR	Insurance premium cost shared by employer and employee (Yes=1)
COSTEMPL	Insurance premium paid entirely by employer (Yes=1)
COSTOTHR	Cost of insurance paid by another source (Yes=1)
CAREBACH	Did you receive most of your care in past 12 months at BACH? (Yes=1)
NOCARE	No care needed in past 12 months (Yes=1)
LACKSRVC	BACH lacks the services I need (Yes=1)
RUDE	BACH personnel are rude (Yes=1)
NOTCMPLT	BACH providers are not thorough with their exams (Yes=1)
SAMPRVDR	Don't see the same provider at each visit (Yes=1)
CARENTGD	Care at BACH not as good as in civilian institutions (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
SCHEDULE	BACH schedule is not convenient (Yes=1)
TOOFAR	BACH is too far from where I live (Yes=1)
APPTHARD	Too hard to get an appointment at BACH (Yes=1)
LONGWAIT	The wait for an appointment is too long at BACH (Yes=1)
REFEROUT	Referred to civilian facility by BACH (Yes=1)
PREFROUT	Prefer care from other source (Yes=1)
OTHRBACH	There is another reason for not receiving care at BACH (Yes=1)
FREECARE	Free care is important (Strongly agree=5)
LESSCHOC	Willing to have less choice of provider to minimize cost (Strongly agree=5)
SMALLCST	Willing to pay a small amount for medical care (Strongly agree=5)
MORECHOC	Willing to pay more to have more choice of providers (Strongly agree=5)
OFFICE0	Willing to pay \$0 for an office visit (Yes=1)
OFFICE10	Willing to pay \$1-\$9 for an office visit (Yes=1)
OFFICE20	Willing to pay \$10-\$20 for and office visit (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
OFFICE30	Willing to pay \$21-\$30 for an office visit (Yes=1)
OFFCMORE	Willing to pay more than \$30 for an office visit (Yes=1)
ER0	Willing to pay \$0 for an ER visit (Yes=1)
ER10	Willing to pay \$1-\$9 for an ER visit (Yes=1)
ER20	Willing to pay \$10-\$20 for an ER visit (Yes=1)
ER30	Willing to pay \$21-\$30 for an ER visit (Yes=1)
ERMORE	Willing to pay more than \$30 for an ER visit (Yes=1)
LAB0	Willing to pay \$0 for Lab and X-ray (Yes=1)
LAB10	Willing to pay \$1-\$9 for Lab and X-ray (Yes=1)
LAB20	Willing to pay \$10-\$20 for Lab and X-ray (Yes=1)
LAB30	Willing to pay \$21-\$30 for Lab and X-ray (Yes=1)
LABMORE	Willing to pay more than \$30 for Lab and X-ray (Yes=1)
DRUG0	Willing to pay \$0 for prescription drugs (Yes=1)
DRUG10	Willing to pay \$1-\$9 for prescription drugs (Yes=1)
DRUG20	Willing to pay \$10-\$20 for prescription drugs (Yes=1)
DRUG30	Willing to pay \$21-\$30 for prescription drugs (Yes=1)
DRUGMORE	Willing to pay more than \$30 for prescription drugs (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
HEALTH	How would you rate your health? (Excellent=5
MCBTRNOW	Health is much better now than a year ago (Yes=1)
SMBTRNOW	Health somewhat better now than a year ago (Yes=1)
SAMENOW	Health is about the same now as it was a year ago (Yes=1)
SMWRSNOW	Health is somewhat worse now than a year ago (Yes=1)
MCWRSNOW	Health is much worse now than a year ago (Yes=1)
BODYPAIN	How much bodily pain have you experienced in the past 4 weeks? (Very Severe=6)
PAININTR	How much has pain interfered with your normal work in the past 4 weeks? (Extremely=5)
HLTHEXCL	Health is excellent, definitely true (Yes=1)
HLTHXMST	Health is excellent, mostly true (Yes=1)
HLTHXDK	Health is excellent, don't know (Yes=1)
HLTHXMF	Health is excellent, mostly false (Yes=1)
HLTHXDF	Health is excellent, definitely false (Yes=1)
MEDPBLM	Significant medical problems in your household (Yes=1)
VSTNONE	No visits to MD or ER in past 12 months (Yes=1)
VST1TO5	1 to 5 visits to MD or ER in the past 12 months (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
VST6TO10	6 to 10 visits to MD or ER in the past 12 months (Yes=1)
VST11TO2	11 to 20 visits to MD or ER in the past 12 months (Yes=1)
VSTMR20	More than 20 visits to MD or ER in the past 12 months (Yes=1)
BACHCARE	Received care at BACH or TMC in the past 12 months (Yes=1)
RATECARE	Rate the health care at BACH/TMC (Excellent=5)
LOCATION	Rate the convenience of BACH's location (Excellent=5)
HOURS	Rate convenience of BACH's hours of operation (Excellent=5)
PCACCESS	Rate access to the primary care clinics at BACH (Excellent=5)
SPACCESS	Rate access to the specialty clinics at BACH (Excellent=5)
ERACCESS	Rate access to ER at BACH (Excellent=5)
PHONE	Rate the telephone appointment system (Excellent=5)
TMTOAPPT	Rate the time between when you make an appointment and when you are seen by the provider (Excellent=5)
TMINCLNC	Rate the wait time in the clinics (Excellent=5)
HLTHINFO	Rate the availability of healthcare information by phone (Excellent=5)
THROEXAM	Rate the thoroughness of exam and accuracy of diagnosis at BACH (Excellent=5)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
SKILL	Rate the skills, experience and training of BACH providers (Excellent=5)
THROTRT	Rate the thoroughness of your treatment at BACH (Excellent=5)
EXPLAIN	Rate the explanation you received of the medical procedures (Excellent=5)
ATTENTIV	Rate the attention given to what you have to say (Excellent=5)
CRTSYPRV	Rate the courtesy of the health care providers at BACH (Excellent=5)
CRTSYSTF	Rate the courtesy of the non-provider staff at BACH (Excellent=5)
CHOICE	Rate the arrangements BACH has for choosing a personal provider (Excellent=5)
SMPRVDR	Rate your ability to see the same provider for each visit at BACH (Excellent=5)
TIMESPNT	Rate the time the provider spends with you during a visit (Excellent=5)
OUTCOME	Rate how much you were helped by the care received at BACH (Excellent=5)
PRESCRIP	Rate the services available for getting prescriptions filled at BACH (Excellent=5)
OVERALL	Rate the overall quality of care and services at BACH (Excellent=5)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
WTNONE	Time between appointment and visit, not applicable (Yes=1)
WT2ORLES	Time between appointment and visit, 2 days or less (Yes=1)
WT3TO7	Time between appointment and visit, 3 to 7 days (Yes=1)
WT8TO14	Time between appointment and visit, 8 to 14 days (Yes=1)
WT15TO28	Time between appointment and visit, 15 to 28 days (Yes=1)
WT1TO2MO	Time between appointment and visit, 1 to 2 months (Yes=1)
WT2ORMOR	Time between appointment and visit, more than 2 months (Yes=1)
CLNONE	Time spent in clinic waiting to see provider, not applicable (Yes=1)
CLWALKIN	Time spent in clinic waiting to see provider, use walk-in clinic (Yes=1)
CLLS10	Time spent in clinic waiting to see provider, less than 10 minutes (Yes=1)
CL10TO15	Time spent in clinic waiting to see provider, 11 to 15 minutes (Yes=1)
CL16TO30	Time spent in clinic waiting to see provider, 16 to 30 minutes (Yes=1)
CL46TO60	Time spent in clinic waiting to see provider, 46 to 60 minutes (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
CL1TO2HR	Time spent in clinic waiting to see provider, 1 to 2 hours (Yes=1)
CLMOR2	Time spent in clinic waiting to see provider, more than 2 hours (Yes=1)
DRLESS5	Time from home to BACH, less than 5 minutes (Yes=1)
DR5TO10	Time from home to BACH, 5 to 10 minutes (Yes=1)
DR11TO15	Time from home to BACH, 11 to 15 minutes (Yes=1)
DR16TO24	Time from home to BACH, 16 to 24 minutes (Yes=1)
DRMORE25	Time from home to BACH, more than 25 minutes (Yes=1)
BEFORE8	Prefer to be seen before 8 a.m. (Yes=1)
AFTER8	Prefer to be seen between 8 a.m. and noon (Yes=1)
NOONTO5	Prefer to be seen between noon and 5 p.m. (Yes=1)
EVENINGS	Prefer to be seen between 5 p.m. and 9 p.m. (Yes=1)
SATURDAY	Prefer to be seen on Saturdays (Yes=1)
AGE	Age at last birthday (Years)
SEX	Sex (Male=1)
ACTDUTY	Beneficiary category=active duty service member (Yes=1)
ADFM	Beneficiary category=Active duty family member (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
RETIREE	Beneficiary category=retired service member (Yes=1)
RETIREFM	Beneficiary category=family member of retired/deceased service member (Yes=1)
OTHERCAT	Beneficiary category=category other than those specified above (Yes=1)
JUNENLST	Pay grade = E-1 to E-4 (Yes=1)
SNRENLST	Pay grade = E-5 to E-9 (Yes=1)
JUNOFFCR	Pay grade = WO1 to O-2 (Yes=1)
SNROFFCR	Pay grade = O-3 to O-8 (Yes=1)
NOTSURE	Pay grade = Respondent not sure of sponsors pay grade (Yes=1)
BRANCH	Branch of service (Army=1, All others=0)
MARRIED	Marital Status, married (Yes=1)
SEPARATE	Marital Status, separated (Yes=1)
DIVORCED	Marital Status, divorced (Yes=1)
WIDOWED	Marital Status, widowed (Yes=1)
SINGLE	Marital Status, never married (Yes=1)
CHILDNON	Number of children (None=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
CHILDONE	Number of children (One=1)
CHILDTWO	Number of children (Two=1)
CHILDTHR	Number of children (Three=1)
CHILDFOR	Number of children (Four=1)
CHILDFIV	Number of children (Five=1)
CHILDMOR	Number of children (Six or more=1)
LES10000	Gross income less than \$10000 per year (Yes=1)
I10TO20	Gross income between \$10000 and \$19999 (Yes=1)
I20TO30	Gross income between \$20000 and \$29999 (Yes=1)
I40TO50	Gross income between \$40000 and \$49999 (Yes=1)
I50TO60	Gross income between \$50000 and \$59999 (Yes=1)
I60TO70	Gross income between \$60000 and \$69999 (Yes=1)
I70TO80	Gross income between \$70000 and \$79999 (Yes=1)
I80MORE	Gross income over \$80000 (Yes=1)
EDLES12	Education, less than 12 years, no diploma (Yes=1)
EDDIPLOM	Education level, high school diploma or GED (Yes=1)

Study Variables and their Operational Definitions (cont.)

Name	Operational Definition
EDSMCLG	Education level, has completed some college level courses, no degree (Yes=1)
EDCLGGRD	Education level, has a college degree (Yes=1)
EDSMPOST	Education level, has completed some post-graduate level course, no degree (Yes=1)
EDPSTGRD	Education level, has a post-graduate degree (Yes=1)
BLACK	Race/ethnicity, Black (Yes=1)
INDIAN	Race/ethnicity, Indian/Native American (Yes=1)
HISPANIC	Race/ethnicity, Hispanic/Spanish (Yes=1)
ASIAN	Race/ethnicity, Asian or Pacific Islander (Yes=1)
CAUCASIA	Race/ethnicity, Caucasian (Yes=1)
RCOTHER	Race/ethnicity, Other (Yes=1)
LESS6MTH	Has lived in Fort Campbell area less than 6 months (Yes=1)
MTH6TO12	Has lived in the Fort Campbell area between 6 and 12 months (Yes=1)
YRS1TO3	Has lived in the Fort Campbell area between 1 and 3 years (Yes=1)
MORE3YRS	Has lived in the Fort Campbell area more than 3 years (Yes=1)
ZIPCODE	Zip code of your home

APPENDIX D
TRI-FOLD BROCHURE

TRICARE Summary

When TRICARE comes to the Fort Campbell area next year, you will be offered an opportunity to choose from a variety of options. The summary below describes advantages and disadvantages of each option.

♦ TRICARE Prime at BACH

Advantages: No out-of-pocket cost for care received at BACH; no deductibles (there is an annual enrollment fee for retirees, survivors, and their dependents); guaranteed access at BACH; Primary Care Manager to coordinate all your health care needs; no claims filing; wellness programs available at no charge; greater assurance of quality.

Disadvantages: Limited choice of providers (must use BACH unless referred to civilian providers by your Primary Care Manager); annual enrollment fee for retirees, survivors, and their dependents; one year lock-in.

♦ TRICARE Prime with Civilian Contractor

Advantages: Low out-of-pocket costs compared to TRICARE Extra and Standard; no deductibles (there is an annual enrollment fee for retirees, survivors, and their dependents); Primary Care Manager to coordinate all your health care needs; no claims filing; wellness programs available at no charge; greater assurance of quality; can use BACH on a space available basis.

Disadvantages: Limited choice of providers (must use contractor's established network of providers); annual enrollment fee for retirees, survivors, and their dependents; one year lock-in; access to BACH not guaranteed.

♦ TRICARE Extra

Advantages: Greater choice of providers (you choose who you want to see from a list of network providers); no annual enrollment fee for retirees, survivors, and their dependents; discounted copayment when using network providers; no claims forms when using network providers; can use BACH on space available basis.

Disadvantages: Access to BACH is not guaranteed; higher cost than TRICARE Prime; same deductibles as TRICARE Standard apply.

♦ TRICARE Standard

Advantages: Greatest choice of providers (you choose any provider you wish to see); no annual enrollment fee for retirees, survivors, and their dependents; can continue to see your current civilian physician even if they choose not to join the TRICARE network of providers; can use BACH on space available basis.

Disadvantages: Most costly option; access to BACH is not guaranteed; same deductibles and cost sharing as standard CHAMPUS currently charges; additional paperwork requirements (claims forms)

TRICARE

The triple-option health benefits program for the Uniformed Services

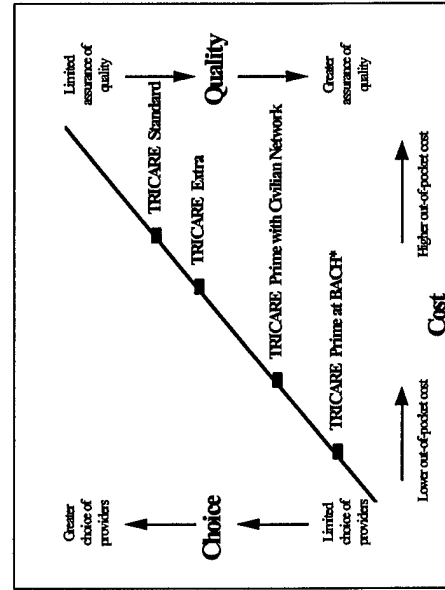
TRICARE Prime

TRICARE Extra

TRICARE Standard

Coming to Fort Campbell
in 1998

Table 2: TRICARE Options



• BACH - Blankenship Army Community Hospital





While it is impossible to explain everything there is to know about TRICARE in this small brochure, we hope to provide enough information for you to answer the questions in the enclosed survey. In the near future, you will hear much more about this program.

TRICARE is the Department of Defense's program to provide better access and high quality health care to its beneficiaries while maintaining its capability to support military operations. This is being accomplished by bringing together the health care resources of the Tri-services (Air Force, Army, and Navy) and supplementing them with a network of civilian providers.

TRICARE offers beneficiaries three health plan options. TRICARE Prime is similar to a Health Maintenance Organization (HMO) which provides care through a select group of providers at little or no out-of-pocket cost. TRICARE Extra is a network of local civilian providers (Preferred Providers) who agree to accept CHAMPUS reimbursement and bill you 5% less copayment than TRICARE Standard (See Table 1). TRICARE Standard is the same as the current standard CHAMPUS program.

At Fort Campbell, TRICARE Prime will be available either through Blanchfield Army Community Hospital (BACH) and the Troop Medical Clinics (TMC) or through a network of local providers set up by a civilian contractor. You will be able to enroll in TRICARE Prime at BACH or with the contractor's network. If you sign up at BACH, you will pay nothing (except an enrollment fee for retirees, survivors, and their dependents) unless the care you need is not available at BACH. If you must go to a civilian provider, the charge will be very small. If you choose to sign up with the contractor's Prime network, you will pay a small copayment for each visit (plus the enrollment fee for retirees, survivors, and their dependents). ACTIVE DUTY military are automatically enrolled in TRICARE Prime, but their dependents and all other beneficiaries must sign up to participate in TRICARE Prime.

Table 1 gives a brief cost comparison of the different options. Again, this is just a brief description of TRICARE. The back side of this brochure outlines some of the advantages and disadvantages of each option.

Table 1: Comparison of Out-of-Pocket Costs

BENEFIT	BENEFICIARY CATEGORY	TRICARE Standard	TRICARE Extra	TRICARE Prime ¹
Choice of Providers	All CHAMPUS Eligibles	Unlimited	Chosen by patient from the approved network	Chosen by Primary Care Manager from approved network
Annual Enrollment Fee	Active Duty Fam ² Retirees & Fam	None None	None None	None \$230 Ind/\$460 Fam
Annual Outpatient Deductible	E-4 & Below Fam E-5 & Above Fam Retirees & Fam	\$50 Ind/\$100 Fam \$150 Ind/\$300 Fam \$150 Ind/\$300 Fam	\$50 Ind/\$100 Fam \$150 Ind/\$300 Fam \$150 Ind/\$300 Fam	None None None
Outpatient Civilian Care Copayment	E-4 & Below Fam E-5 & Above Fam Retirees & Fam	20% of charges ³ 20% ³ 25% ³	15% of charges 15% 20%	\$6 \$12 \$12
Laboratory & X-ray Services	E-4 & Below Fam E-5 & Above Fam Retirees & Fam	20% ³ 20% ³ 25% ³	15% 15% 20%	\$6 ⁴ \$12 ⁴ \$12 ⁴
Civilian Hospitalization Copayment	Active Duty Fam Retirees and Fam	\$9.50 per day (\$25 Minimum) \$323 per day + 25% of Physician Charges	\$9.50 per day (\$25 Minimum) \$250 per day + 20% of Physician Charges	\$11 per day; \$20 per day Mental Health \$11 per day; \$40 per day Mental Health
Ambulance Service	E-4 & Below Fam E-5 & Above Fam Retirees & Fam	20% of charges ³ 20% ³ 25% ³	15% of charges 15% 20%	\$10 \$15 \$20
Emergency Room Visit	E-4 & Below Fam E-5 & Above Fam Retirees & Fam	20% ³ 20% ³ 25% ³	15% 15% 20%	\$10 \$30 \$30
Prescription Drugs	Active Duty Fam Retiree Fam	20% ³ 25% ³	15% (No Deductible) 20% (No Deductible)	\$5 (up to 30 day supply) \$9

¹ These copayments apply only to care received outside of Blanchfield Army Community Hospital

² Fam = Family

³ Under TRICARE Standard your out-of-pocket costs could actually be higher than these stated percentage

⁴ No cost if provided as part of an office visit, if a copayment is collected for the visit

NOTE: This chart does not describe all of the cost of benefits included in TRICARE

APPENDIX E

DESCRIPTIVE STATISTICS AND CORRELATIONS OF SURVEY VARIABLES WITH INTENT TO SELECT TRICARE PRIME AT BACH

Appendix E

Descriptive Statistics and Correlations of Survey Variables with Intent to Select

TRICARE Prime at Blanchfield Army Community Hospital

Variable	n	Mean	Std. Dev.	<i>r</i>	<i>p</i> [*]
UNDREXCL	165	0.049	0.215		
UNDRGOOD	165	0.415	0.493	0.261	.001
UNDRFAIR	165	0.244	0.429	-0.171	.029
UNDRPOOR	165	0.250	0.433		
NOUNDER	165	0.043	0.202		
SOURCCB	165	0.194	0.397		
SOURCTHM	165	0.042	0.202		
SOURCFSG	165	0.164	0.371		
SOURCPRB	165	0.055	0.228		
SOURCPN	165	0.309	0.464		
SOURCAT	165	0.436	0.497		
SOURCEXP	165	0.049	0.215		
SOURCPM	165	0.249	0.433		
SOURCOTH	165	0.188	0.392		
PRIMEMTF	165	0.600	0.491		
PRIMECON	165	0.182	0.387	-0.577	.000
EXTRA	165	0.061	0.239	-0.311	.000
STANDARD	165	0.133	0.341	-0.480	.000
NOTRICAR	165	0.024	0.154		
BACHTMC	165	0.765	0.417	0.250	.001
BACHER	165	0.043	0.202	0.170	.029
VA	165	0.012	0.110		
CIVILMD	165	0.086	0.279	-0.287	.000
CIVHOSP	165	0.019	0.134	-0.168	.031
CIVILER	165	0.000	0.000		
OTHRSRC	165	0.031	0.172		
NORGLR	165	0.049	0.215	-0.164	.036
UNKNOWN	165	0.006	0.078		
INSCHAMP	165	0.906	0.288		
INSMEDCR	165	0.092	0.276		
INSSPLMT	165	0.145	0.346		
INSPRVT	165	0.145	0.346	-0.195	.012
INSOTHER	165	0.006	0.078		
INSUNKNW	165	0.032	0.172		
INSNTAPL	165	0.703	0.458	0.255	.001
PAYALL	165	0.182	0.380		
COSTSHAR	165	0.107	0.304	-0.206	.008

Descriptive Statistics Continued

Variable	n	Mean	Std. Dev.	<i>r</i>	<i>p</i> [*]
COSTEMPL	165	0.006	0.078		
COSTOTHR	165	0.006	0.078		
CAREBACH	165	0.761	0.425	0.246	.001
NOCARE	39	0.256	0.442		
LACKSRVC	39	0.180	0.389		
RUDE	39	0.154	0.366		
NOTCMPLT	39	0.154	0.366		
SAMPRVDR	39	0.103	0.307		
CARENTGD	39	0.103	0.307		
SCHEDULE	39	0.077	0.270		
TOOFAR	39	0.103	0.307		
APPTHARD	39	0.180	0.389		
LONGWAIT	39	0.180	0.389		
REFEROUT	39	0.103	0.307		
PREFROUT	39	0.154	0.366		
OTHRBACH	39	0.231	0.427		
FREECARE	165	4.614	0.791	0.161	.039
LESSCHOC	165	3.669	1.218	0.215	.006
SMALLCST	165	3.522	1.245		
MORECHOC	165	2.919	1.148	-0.327	.000
OFFICE0	165	0.210	0.405		
OFFICE10	165	0.272	0.442		
OFFICE20	165	0.389	0.485		
OFFICE30	165	0.086	0.279		
OFFCMORE	165	0.043	0.202		
ER0	165	0.231	0.417		
ER10	165	0.156	0.359		
ER20	165	0.300	0.453		
ER30	165	0.207	0.400		
ERMORE	165	0.106	0.304		
LAB0	165	0.231	0.417		
LAB10	165	0.213	0.404		
LAB20	165	0.344	0.469		
LAB30	165	0.131	0.334		
LABMORE	165	0.081	0.270		
DRUG0	165	0.275	0.441		
DRUG10	165	0.352	0.470		
DRUG20	165	0.275	0.441		
DRUG30	165	0.069	0.250	-0.175	.024
DRUGMORE	165	0.031	0.172		
HEALTH	165	4.024	0.943		

Descriptive Statistics Continued

Variable	n	Mean	Std. Dev.	<i>r</i>	<i>p</i> [*]
MCBTRNOW	165	0.067	0.315		
SMBTRNOW	165	0.055	0.228		
SAMENOW	165	0.776	0.418		
SMWRSNOW	165	0.103	0.305		
MCWRSNOW	165	0.018	0.134		
BODYPAIN	165	2.515	1.295		
PAININTR	165	1.703	0.939		
HLTHEXCL	165	0.321	0.468		
HLTHXMST	165	0.473	0.501		
HLTHXDK	165	0.079	0.270		
HLTHXMF	165	0.079	0.270		
HLTHXDF	165	0.049	0.215		
MEDPBLM	165	0.285	0.453		
VSTNONE	165	0.043	0.202		
VST1TO5	165	0.518	0.500		
VST6TO10	165	0.262	0.440		
VST11TO2	165	0.104	0.305		
VSTMR20	165	0.073	0.260		
BACHCARE	165	0.860	0.347	0.170	.029
RATECARE	142	3.421	1.044		
LOCATION	143	3.790	1.027	0.300	.000
HOURS	143	3.394	1.094	0.220	.008
PCACCESS	133	3.008	1.177		
SPACCESS	118	2.678	1.313		
ERACCESS	117	3.197	1.308		
PHONE	128	2.094	1.119		
TMTOAPPT	129	2.426	1.037		
TMINCLNC	143	2.239	1.038		
HLTHINFO	105	2.486	0.991		
THROEXAM	143	3.022	1.184		
SKILL	143	3.268	1.058	0.190	.024
THROTRT	143	3.166	1.154	0.170	.043
EXPLAIN	143	3.290	1.146	0.201	.016
ATTENTIV	143	3.169	1.233	0.199	.017
CRTSYPRV	143	3.350	1.182		
CRTSYSTF	143	3.080	1.284		
CHOICE	75	2.333	1.256		
SMPRVDR	108	2.269	1.243		
TIMESPNT	133	2.936	1.233	0.193	.026
OUTCOME	143	3.136	1.164	0.176	.035
PRESCRIP	143	3.188	1.190	0.253	.002

Descriptive Statistics Continued

Variable	n	Mean	Std. Dev.	<i>r</i>	<i>p</i> [*]
OVERALL	143	3.064	1.050	0.241	.004
WTNONE	165	0.199	0.395		
WT2ORLES	165	0.168	0.370		
WT3TO7	165	0.224	0.413		
WT8TO14	165	0.193	0.391		
WT15TO28	165	0.151	0.353		
WT1TO2MO	165	0.075	0.260		
WT2ORMOR	165	0.025	0.154		
CLNONE	165	0.184	0.386		
CLWALKIN	165	0.025	0.154		
CLLS10	165	0.061	0.239		
CL10TO15	165	0.086	0.279		
CL16TO30	165	0.313	0.462		
CL31TO45	165	0.178	0.381		
CL46TO60	165	0.110	0.313		
CL1TO2HR	165	0.031	0.172		
CLMOR2	165	0.018	0.134		
DRLESS5	165	0.133	0.341		
DR5TO10	165	0.176	0.382		
DR11TO15	165	0.200	0.401		
DR16TO24	165	0.267	0.444		
DRMORE25	165	0.224	0.418		
BEFORE8	165	0.129	0.334		
AFTER8	165	0.583	0.492		
NOONTO5	165	0.173	0.376		
EVENINGS	165	0.135	0.341		
SATURDAY	165	0.049	0.215		
AGE	165	39.546	12.238	-0.171	.028
SEX	165	0.636	0.495		
ACTDUTY	165	0.470	0.499		
ADFM	165	0.256	0.437		
RETIREE	165	0.207	0.405		
RETIREFM	165	0.055	0.228		
OTHERCAT	165	0.000	0.000		
JUNENLST	165	0.069	0.250		
SNRENLST	165	0.350	0.471		
JUNOFFCR	165	0.244	0.424		
SNROFFCR	165	0.338	0.467		
NOTSURE	165	0.000	0.000		
BRANCH	165	0.994	0.078		
MARRIED	165	0.873	0.334		

Descriptive Statistics Continued

Variable	n	Mean	Std. Dev.	<i>r</i>	<i>p</i> [*]
SEPARATE	165	0.024	0.154		
DIVORCED	165	0.085	0.280		
WIDOWED	165	0.018	0.134		
SINGLE	165	0.012	0.110		
CHILDNON	165	0.297	0.458		
CHILDONE	165	0.242	0.430		
CHILDTWO	165	0.303	0.461	0.188	.015
CHILDTHR	165	0.115	0.320		
CHILDFOR	165	0.036	0.188	0.159	.042
CHILDFIV	165	0.006	0.078		
CHILDMOR	165	0.000	0.000		
LES10000	165	0.006	0.078		
I10TO20	165	0.063	0.239		
I20TO30	165	0.156	0.359		
I30TO40	165	0.163	0.364		
I40TO50	165	0.213	0.404		
I50TO60	165	0.188	0.386		
I60TO70	165	0.106	0.304		
I70TO80	165	0.013	0.110		
I80MORE	165	0.094	0.288		
EDLES12	165	0.012	0.110		
EDDIPLOM	165	0.092	0.288		
EDSMCLG	165	0.317	0.465		
EDCLGGRD	165	0.274	0.446	0.162	.037
EDSMPOST	165	0.092	0.288	-0.175	.025
EDPSTGRD	165	0.213	0.410		
BLACK	165	0.117	0.320		
INDIAN	165	0.007	0.078		
HISPANIC	165	0.043	0.202		
ASIAN	165	0.025	0.154		
CAUCASIA	165	0.796	0.400		
RCOTHER	165	0.012	0.110		
LESS6MTH	165	0.018	0.134		
MTH6TO12	165	0.158	0.366		
YRS1TO3	165	0.424	0.496		
MORE3YRS	165	0.400	0.491		

*Probabilities are only reported on items whose correlations are significant at a $p < .05$ level.